

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Avi Ashkenazi, et al. Serial No.: Filed herewith Filed: Herewith For: <i>Secreted and Transmembrane Polypeptides and Nucleic Acids Encoding the Same</i>	Group Art Unit: Not yet assigned Examiner: Not yet assigned Express Mail No: EL 895 375 467 US Mailed: November 15, 2001
---	---

CERTIFICATE RE: SEQUENCE LISTING

RESPONSE UNDER 37 CFR § 1.821(f) and (g)

Box: Patent Application
Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

I hereby state that the Sequence Listing submitted herewith is submitted in paper copy and a computer-readable diskette, and that the information recorded in computer readable form is identical to the written sequence listing. I further state that this submission includes no new matter.

Respectfully submitted,

GENENTECH, INC.

By: *Elizabeth M. Barnes*
Elizabeth M. Barnes, Ph.D.
Reg. No. 35,059
Telephone No. (650) 225-4563

Date: November 15, 2001



09157

PATENT TRADEMARK OFFICE

Sequence Listing

<110> Avi J. Ashkenazi
 Kevin P. Baker
 David A. Botstein
 Luc Desnoyers
 Dan L. Eaton
 Napoleone Ferrara
 Sherman Fong
 Wei-Qiang Gao
 Hanspeter Gerber
 Mary E. Gerritsen
 Audrey Goddard
 Paul J. Godowski
 Austin L. Gurney
 Ivar J. Kljavin
 Jennie P. Mather
 Mary A. Napier
 James Pan
 Nicholas F. Paoni
 Margaret Ann Roy
 Timothy A. Stewart
 Daniel Tumas
 Colin K. Watanabe
 P.Mickey Williams
 William I. Wood
 Zemin Zang

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
 ACIDS ENCODING THE SAME

<130> P3130R1C1

<150> 60/056974

<151>1997-08-26

<150> 60/059115

<151> 1997-09-17

<150> 60/059263

<151> 1997-09-18

<150> 60/059588

<151> 1997-09-17

<150> 60/062285

<151> 1997-10-17

<150> 60/062816

<151> 1997-10-24

<150> 60/063082

<151> 1997-10-31

<150> 60/063329

<151> 1997-10-27

<150> 60/063733

<151> 1997-10-29

<150> 60/066364
<151> 1997-11-21

<150> 60/066840
<151> 1997-11-25

<150> 60/069694
<151> 1997-12-16

<150> 60/074086
<151> 1998-02-09

<150> 60/074092
<151> 1998-02-09

<150> 60/079294
<151> 1998-03-25

<150> 60/081049
<151> 1998-04-08

<150> 60/095998
<151> 1998-08-10

<150> 60/097000
<151> 1998-08-18

<150> 60/099601
<151> 1998-09-09

<150> 60/099803
<151> 1998-09-10

<150> 60/099811
<151> 1998-09-10

<150> 60/099812
<151> 1998-09-10

<150> 60/100858
<151> 1998-09-17

<150> 60/101922
<151> 1998-09-24

<150> 60/106032
<151> 1998-10-28

<150> 60/109304
<151> 1998-11-20

<150> 60/125778
<151> 1999-03-23

<150> 60/139695
<151> 1999-06-15

<150> 60/145070
<151> 1999-07-20

<150> 60/145698
<151> 1999-07-26

<150> 60/149396
<151> 1999-08-17

<150> 60/169495
<151> 1999-12-07

<150> 08/918874
<151> 1997-08-26

<150> 08/933821
<151> 1997 -09-19

<150> 08/960507
<151> 1997-10-29

<150> 09/114844
<151> 1998-07-14

<150> 09/136801
<151> 1998-08-19

<150> 09/136804
<151> 1998-08-19

<150> 09/136828
<151> 1998-08-19

<150> 09/158342
<151> 1998-09-21

<150> 09/180997
<151> 1998-09-10

<150> 09/202088
<151> 1998-12-08

<150> 09/254311
<151> 1999-03-03

<150> 09/254460
<151> 1999-03-09

<150> 09/254465
<151> 1999-03-05

<150> 09/284663
<151> 1999-04-15

<150> 09/332928
<151> 1999-06-14

<150> 09/332929

<151> 1999-06-14

<150> 09/333075
<151> 1999-06-14

<150> 09/333077
<151> 1999-06-14

<150> 09/380137
<151> 1999-08-25

<150> 09/380138
<151> 1999-08-25

<150> 09/380139
<151> 1999-08-25

<150> 09/403296
<151> 1999-10-18

<150> 09/403297
<151> 1999-10-18

<150> 09/423741
<151> 1999-11-10

<150> 09/423844
<151> 1999-11-12

<150> 09/522342
<151> 2000-03-09

<150> 09/548815
<151> 2000-04-13

<150> 09/664610
<151> 2000-09-18

<150> 09/665350
<151> 2000-09-18

<150> 09/709238
<151> 2000-11-08

<150> 09/767609
<151> 2001-01-22

<150> 09/802706
<151> 2001-03-09

<150> 09/808689
<151> 2001-03-14

<150> 09/866028
<151> 2001-05-25

<150> 09/870574
<151> 2001-05-30

<150> 09/872035
<151> 2001-06-01

<150> 09/886342
<151> 2001-06-19

<150> PCT/US98/14552
<151> 1998-07-14

<150> PCT/US98/18824
<151> 1998-09-10

<150> PCT/US98/19093
<151> 1998-09-14

<150> PCT/US98/19330
<151> 1998-09-16

<150> PCT/US98/19437
<151> 1998-09-17

<150> PCT/US98/24855
<151> 1998-11-20

<150> PCT/US98/25108
<151> 1998-12-01

<150> PCT/US98/25190
<151> 1998-11-25

<150> PCT/US99/05028
<151> 1999-03-08

<150> PCT/US99/12252
<151> 1999-06-02

<150> PCT/US99/20111
<151> 1999-09-01

<150> PCT/US99/20594
<151> 1999-09-08

<150> PCT/US99/21090
<151> 1999-09-15

<150> PCT/US99/21547
<151> 1999-09-15

<150> PCT/US99/28301
<151> 1999-12-01

<150> PCT/US99/28313
<151> 1999-11-30

<150> PCT/US99/28565
<151> 1999-12-02

<150> PCT/US99/30999

<151> 1999-12-20

<150> PCT/US00/00219
<151> 2000-01-05

<150> PCT/US00/04341
<151> 2000-02-18

<150> PCT/US00/04342
<151> 2000-02-18

<150> PCT/US00/04414
<151> 2000-02-22

<150> PCT/US00/05601
<151> 2000-03-01

<150> PCT/US00/05841
<151> 2000-03-02

<150> PCT/US00/06471
<151> 2000-03-09

<150> PCT/US00/07377
<151> 2000-03-20

<150> PCT/US00/08439
<151> 2000-03-30

<150> PCT/US00/13358
<151> 2000-05-15

<150> PCT/US00/13705
<151> 2000-05-17

<150> PCT/US00/14042
<151> 2000-05-22

<150> PCT/US00/14941
<151> 2000-05-30

<150> PCT/US00/15264
<151> 2000-06-02

<150> PCT/US00/22031
<151> 2000-08-11

<150> PCT/US00/23328
<151> 2000-08-24

<150> PCT/US00/23522
<151> 2000-08-23

<150> PCT/US00/32678
<151> 2000-12-01

<150> PCT/US01/06520
<151> 2001-02-28

<150> PCT/US01/17443

<151> 2001-05-30

<150> PCT/US01/17800

<151> 2001-06-01

<150> PCT/US01/19692

<151> 2001-06-20

<150> PCT/US01/21066

<151> 2001-06-29

<150> PCT/US01/21735

<151> 2001-04-09

<160> 151

<210> 1

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 1

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 2

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 2

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 3

<211> 2290

<212> DNA

<213> Homo Sapien

<400> 3

ggctgagggg aggcccggag cctttctggg gcctggggga tcctcttgca 50

ctgggtgggtg gagagaagcg cctgcagcca accaggggtca ggctgtgctc 100

acagtttcct ctggcggcat gtaaaggctc cacaaaggag ttgggagttc 150

aaatgaggct gctgcggacg gcctgaggat ggaccccaag ccctggacct 200

gccgagcgtg gactgaggc agcggctgac gctactgtga gggaaagaag 250

gttgtgagca gcccgcagg acccctggcc agccctggcc ccagcctctg 300

ccggagccct ctgtggaggc agagccagtg gagcccagtg aggcagggct 350

gcttggcagc caccggcctg caactcagga acccctccag aggccatgga 400
caggctgccc cgctgacggc caggggtgaag catgtgagga gccgccccgg 450
agccaagcag gagggaagag gctttcatag attctattca caaagaataa 500
ccaccatttt gcaaggacca tgaggccact gtgcgtgaca tgctgggtggc 550
tcggactgct ggctgccatg ggagctgttg caggccagga ggacggtttt 600
gagggcactg aggagggctc gccaaagagag ttcatttacc taaacaggta 650
caagcgggcg ggcgagtccc aggacaagtg cacctacacc ttcattgtgc 700
cccagcagcg gggtcacgggt gccatctgcg tcaactccaa ggagcctgag 750
gtgcttcttg agaaccgagt gcataagcag gagctagagc tgctcaacaa 800
tgagctgctc aagcagaagc ggcagatcga gacgctgcag cagctgggtgg 850
aggtggacgg cggcattgtg agcgagggtga agctgctgcg caaggagagc 900
cgcaacatga actcgcggtt caccgagctc tacatgcagc tcctgcacga 950
gatcatccgc aagcgggaca acgcgttgga gctctcccag ctggagaaca 1000
ggatcctgaa ccagacagcc gacatgctgc agctggccag caagtacaag 1050
gacctggagc acaagtacca gcacctggcc aactggccc acaaccaatc 1100
agagatcatc gcgcagcttg aggagcactg ccagaggggtg ccctcggcc 1150
ggcccgtccc ccagccaccc cccgctgccc cgccccgggt ctaccaacca 1200
cccacctaca accgcatcat caaccagatc totaccaacg agatccagag 1250
tgaccagaac ctgaagggtg tgccaccccc tctgcccact atgcccactc 1300
tcaccagcct cccatcttcc accgacaagc cgctggggccc atggagagac 1350
tgctgcagg ccctggagga tggccacgac accagctcca totacctggt 1400
gaagccggag aacaccaacc gcctcatgca ggtgtggtgc gaccagagac 1450
acgacccccg gggctggacc gtcattcaga gacgcctgga tggctctggt 1500
aacttcttca ggaactggga gacgtacaag caagggtttg ggaacattga 1550
cggcgaatac tggctgggcc tggagaacat ttactggctg acgaaccaag 1600
gcaactacaa actcctggtg accatggagg actggtccgg ccgcaaagtc 1650
tttgcagaat acgccagttt ccgcctggaa cctgagagcg agtattataa 1700
gctgcggctg gggcgctacc atggcaatgc gggtgactcc ttacatggc 1750
acaacggcaa gcagttcacc accctggaca gagatcatga tgtctacaca 1800

Thr	Ala	Asp	Met	Leu	Gln	Leu	Ala	Ser	Lys	Tyr	Lys	Asp	Leu	Glu	170	175	180
His	Lys	Tyr	Gln	His	Leu	Ala	Thr	Leu	Ala	His	Asn	Gln	Ser	Glu	185	190	195
Ile	Ile	Ala	Gln	Leu	Glu	Glu	His	Cys	Gln	Arg	Val	Pro	Ser	Ala	200	205	210
Arg	Pro	Val	Pro	Gln	Pro	Pro	Pro	Ala	Ala	Pro	Pro	Arg	Val	Tyr	215	220	225
Gln	Pro	Pro	Thr	Tyr	Asn	Arg	Ile	Ile	Asn	Gln	Ile	Ser	Thr	Asn	230	235	240
Glu	Ile	Gln	Ser	Asp	Gln	Asn	Leu	Lys	Val	Leu	Pro	Pro	Pro	Leu	245	250	255
Pro	Thr	Met	Pro	Thr	Leu	Thr	Ser	Leu	Pro	Ser	Ser	Thr	Asp	Lys	260	265	270
Pro	Ser	Gly	Pro	Trp	Arg	Asp	Cys	Leu	Gln	Ala	Leu	Glu	Asp	Gly	275	280	285
His	Asp	Thr	Ser	Ser	Ile	Tyr	Leu	Val	Lys	Pro	Glu	Asn	Thr	Asn	290	295	300
Arg	Leu	Met	Gln	Val	Trp	Cys	Asp	Gln	Arg	His	Asp	Pro	Gly	Gly	305	310	315
Trp	Thr	Val	Ile	Gln	Arg	Arg	Leu	Asp	Gly	Ser	Val	Asn	Phe	Phe	320	325	330
Arg	Asn	Trp	Glu	Thr	Tyr	Lys	Gln	Gly	Phe	Gly	Asn	Ile	Asp	Gly	335	340	345
Glu	Tyr	Trp	Leu	Gly	Leu	Glu	Asn	Ile	Tyr	Trp	Leu	Thr	Asn	Gln	350	355	360
Gly	Asn	Tyr	Lys	Leu	Leu	Val	Thr	Met	Glu	Asp	Trp	Ser	Gly	Arg	365	370	375
Lys	Val	Phe	Ala	Glu	Tyr	Ala	Ser	Phe	Arg	Leu	Glu	Pro	Glu	Ser	380	385	390
Glu	Tyr	Tyr	Lys	Leu	Arg	Leu	Gly	Arg	Tyr	His	Gly	Asn	Ala	Gly	395	400	405
Asp	Ser	Phe	Thr	Trp	His	Asn	Gly	Lys	Gln	Phe	Thr	Thr	Leu	Asp	410	415	420
Arg	Asp	His	Asp	Val	Tyr	Thr	Gly	Asn	Cys	Ala	His	Tyr	Gln	Lys	425	430	435
Gly	Gly	Trp	Trp	Tyr	Asn	Ala	Cys	Ala	His	Ser	Asn	Leu	Asn	Gly	440	445	450
Val	Trp	Tyr	Arg	Gly	Gly	His	Tyr	Arg	Ser	Arg	Tyr	Gln	Asp	Gly			

Gln	Pro	Arg	Asp	Pro	Val	Arg	Pro	Pro	Arg	Arg	Gly	Arg	Gly	Pro
				80					85					90
His	Glu	Pro	Arg	Arg	Lys	Lys	Gln	Asn	Val	Asp	Gly	Leu	Val	Leu
				95					100					105
Asp	Thr	Leu	Ala	Val	Ile	Arg	Thr	Leu	Val	Asp	Lys			
				110					115					

<210> 10
 <211> 1231
 <212> DNA
 <213> Homo Sapien

<400> 10
 cccacgcgtc cgcgcagtcg cgcagttctg cctccgcctg ccagtctcgc 50
 ccgcgatccc ggcccggggc tgtggcgctg actccgaccc aggcagccag 100
 cagcccgcgc gggagccgga ccgccgccgg aggagctcgg acggcatgct 150
 gagccccctc ctttgctgaa gcccagtgct ggagaagccc gggcaaacgc 200
 aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250
 gaggagaagg aggaggaggc gaaccacagag aggggcagca aaagaagcgg 300
 tgggtggtggg cgtcgtggcc atggcggcgg ctatcgccag ctcgctcatc 350
 cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaagtg 400
 tgtcagcagc ccagcaaaag gcaagaccag ctgcgacaaa aacaagttaa 450
 atgtcttttc ccgggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500
 agaccagagc ctcagcttaa gggatatagt accaagctat acagccgaca 550
 aggctaccac ttgcagctgc aggcgggatg aaccattgat ggcaccaaag 600
 atgaggacag cacttacact ctgtttaacc tcatccctgt gggctctgca 650
 gtgggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700
 tgaggggatac ttgtacacct cggaactttt cacacctgag tgcaaattca 750
 aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800
 cgtcagcagc agtcaggccg aggggtggtat ctgggtctga acaaagaagg 850
 agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900
 ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
 gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
 aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
 caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100

ccaggtgctg ttgaattctt ctagcagtc ttcacccaaa agttcaaatt 1150
 tgtcagtgac atttaccaaaa caaacaggca gagttcacta ttctatctgc 1200
 cattagacct tcttatcatc cataactaaag c 1231

<210> 11
 <211> 245
 <212> PRT
 <213> Homo Sapien

<400> 11
 Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln
 1 5 10 15
 Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser
 20 25 30
 Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
 35 40 45
 Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
 50 55 60
 Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
 65 70 75
 Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
 80 85 90
 Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
 95 100 105
 Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
 110 115 120
 Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
 125 130 135
 Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
 140 145 150
 Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser
 155 160 165
 Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
 170 175 180
 Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
 185 190 195
 Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
 200 205 210
 Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys
 215 220 225
 Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser

240

```
<210> 12
<211> 744
<212> DNA
<213> Homo Sapien
```

```

<400> 12
atggccgcg ccatcgctag cggcttgatc cgccagaagc ggcaggcgcg 50
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100
gcaagaaccg cgggctctgc aacggcaacc tgggtggatat cttctccaaa 150
gtgcgcatct tcggcctcaa gaagcgcagg ttgcggcgcc aagatcccca 200
gctcaagggt atagtgacca ggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300
tctacactct tcaacctcat accagtggga ctacgtgttg ttgccatcca 350
gggagtga aaacagggtgt atatagccat gaatggagaa gggtacctct 400
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500
tggtagagcc tgggtttttgg gattaaataa ggaagggcaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600
ttggaagtgt ccatgtaccg agaaccatct ttgcatgatg ttgggggaaac 650
ggtcccgaag cctgggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

```

```
<210> 13
<211> 247
<212> PRT
<213> Homo Sapien
```

```

<400> 13
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln
  1                      5                      10          15

Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg
                20                      25          30

Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val
                35                      40          45

Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
                50                      55          60

```

Variable	Mean	SD	Min	Max
Age	34.5	10.2	22	55
Gender	Male	Female		
Marital status	Married	Single		
Education	High school	College		
Occupation	Manager	Worker		
Income	\$10,000	\$20,000		
Health status	Good	Fair		
Exercise frequency	Weekly	Monthly		
Stress level	Low	High		
Sleep quality	Good	Poor		
Dietary habits	Healthy	Unhealthy		
Alcohol consumption	None	Occasional		
Tobacco use	Non-smoker	Smoker		
Family size	2	3		
Work hours	40	50		
Commuting time	30	45		
Living space	Small	Large		
Neighborhood safety	Safe	Unsafe		
Access to green spaces	Yes	No		
Proximity to public transport	Close	Far		
Cost of housing	Low	High		
Quality of housing	Good	Poor		
Availability of services	High	Low		
Community involvement	Active	Passive		
Perceived social support	High	Low		
Life satisfaction	High	Low		
Overall well-being	Good	Fair		

ccgagggccc agaggaggcc gacgtgccc agctcctccg ggggtcccgc 400
 ccgcgagctt tcttctcgcc ttgcgatctc ctctctcgcc gtcttgga 450
 tgccaggaat aaaaaggata ctcaactgtta ccattctggc tctctgtctt 500
 ccaagccctg ggaatgcaca ggcacagtgc acgaatggct ttgacctgga 550
 tcgccagtca ggacagtgtt tagatattga tgaatgccga accatccccg 600
 aggctgccc aggagacatg atgtgtgtta accaaaatgg cgggtattta 650
 tgcattcccc ggacaaaacc tgtgtatcga gggccctact cgaacccta 700
 ctgcaccccc tactcaggtc cgtaccacgc agctgcccc cactctcag 750
 ctccaaacta tcccacgatc tccaggctc ttatatgccg ctttgatac 800
 cagatggatg aaagcaacca atgtgtggat gtggacgagt gtgcaacaga 850
 ttcccaccag tgcaacccca ccagatctg catcaatact gaaggcgggt 900
 acacctgctc ctgcaccgac ggatattggc ttctggaagg ccagtgtta 950
 gacattgatg aatgtcgcta tggttactgc cagcagctct gtgcgaatgt 1000
 tcctggatcc tattcttgta catgcaacc tggttttacc ctcaatgagg 1050
 atggaaggct ttgccaagat gtgaacgagt gtgccaccga gaaccctgc 1100
 gtgcaaacct gcgtcaacac ctacggctct ctcatctgcc gctgtgacct 1150
 aggatatgaa cttgaggaag atggcggtca ttgcagtgat atggacgagt 1200
 gcagcttctc tgagttcctc tgccaacatg agtgtgtgaa ccagcccggc 1250
 acatacttct gctcctgcc tccaggctac atcctgctgg atgacaaccg 1300
 aagctgccaa gacatcaacg aatgtgagca caggaaccac acgtgcaacc 1350
 tgcagcagac gtgctacaat ttacaagggg gcttcaaagt catcgacccc 1400
 atccgctgtg aggagcctta tctgaggatc agtgataacc gctgtatgtg 1450
 tcctgctgag aaccctggct gcagagacca gccctttacc atcttgta 1500
 gggacatgga cgtgggtgtc ggacgctccg ttcccgtga catottccaa 1550
 atgcaagcca cgaccgcta cctgggggc tattacattt tccagatcaa 1600
 atctgggaat gagggcagag aattttacat gcggcaaacc ggccccatca 1650
 gtgccaccct ggtgatgaca cggccatca aaggggcccc ggaaatccag 1700
 ctggacttgg aaatgatcac tgtcaacact gtcacaaact tcagaggcag 1750
 ctccgtgatc cgactgcgga tatatgtgtc gcagtacca ttctgagcct 1800

Pro	Tyr	Pro	Ala	Ala	Ala	Pro	Pro	Leu	Ser	Ala	Pro	Asn	Tyr	Pro
				95					100					105
Thr	Ile	Ser	Arg	Pro	Leu	Ile	Cys	Arg	Phe	Gly	Tyr	Gln	Met	Asp
				110					115					120
Glu	Ser	Asn	Gln	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	Asp	Ser
				125					130					135
His	Gln	Cys	Asn	Pro	Thr	Gln	Ile	Cys	Ile	Asn	Thr	Glu	Gly	Gly
				140					145					150
Tyr	Thr	Cys	Ser	Cys	Thr	Asp	Gly	Tyr	Trp	Leu	Leu	Glu	Gly	Gln
				155					160					165
Cys	Leu	Asp	Ile	Asp	Glu	Cys	Arg	Tyr	Gly	Tyr	Cys	Gln	Gln	Leu
				170					175					180
Cys	Ala	Asn	Val	Pro	Gly	Ser	Tyr	Ser	Cys	Thr	Cys	Asn	Pro	Gly
				185					190					195
Phe	Thr	Leu	Asn	Glu	Asp	Gly	Arg	Ser	Cys	Gln	Asp	Val	Asn	Glu
				200					205					210
Cys	Ala	Thr	Glu	Asn	Pro	Cys	Val	Gln	Thr	Cys	Val	Asn	Thr	Tyr
				215					220					225
Gly	Ser	Leu	Ile	Cys	Arg	Cys	Asp	Pro	Gly	Tyr	Glu	Leu	Glu	Glu
				230					235					240
Asp	Gly	Val	His	Cys	Ser	Asp	Met	Asp	Glu	Cys	Ser	Phe	Ser	Glu
				245					250					255
Phe	Leu	Cys	Gln	His	Glu	Cys	Val	Asn	Gln	Pro	Gly	Thr	Tyr	Phe
				260					265					270
Cys	Ser	Cys	Pro	Pro	Gly	Tyr	Ile	Leu	Leu	Asp	Asp	Asn	Arg	Ser
				275					280					285
Cys	Gln	Asp	Ile	Asn	Glu	Cys	Glu	His	Arg	Asn	His	Thr	Cys	Asn
				290					295					300
Leu	Gln	Gln	Thr	Cys	Tyr	Asn	Leu	Gln	Gly	Gly	Phe	Lys	Cys	Ile
				305					310					315
Asp	Pro	Ile	Arg	Cys	Glu	Glu	Pro	Tyr	Leu	Arg	Ile	Ser	Asp	Asn
				320					325					330
Arg	Cys	Met	Cys	Pro	Ala	Glu	Asn	Pro	Gly	Cys	Arg	Asp	Gln	Pro
				335					340					345
Phe	Thr	Ile	Leu	Tyr	Arg	Asp	Met	Asp	Val	Val	Ser	Gly	Arg	Ser
				350					355					360
Val	Pro	Ala	Asp	Ile	Phe	Gln	Met	Gln	Ala	Thr	Thr	Arg	Tyr	Pro
				365					370					375
Gly	Ala	Tyr	Tyr	Ile	Phe	Gln	Ile	Lys	Ser	Gly	Asn	Glu	Gly	Arg

	380		385		390
Glu Phe Tyr Met	Arg Gln Thr Gly Pro	Ile Ser Ala Thr Leu Val			
	395	400		405	
Met Thr Arg Pro	Ile Lys Gly Pro Arg	Glu Ile Gln Leu Asp Leu			
	410	415		420	
Glu Met Ile Thr	Val Asn Thr Val Ile	Asn Phe Arg Gly Ser Ser			
	425	430		435	
Val Ile Arg Leu	Arg Ile Tyr Val Ser	Gln Tyr Pro Phe			
	440	445			

<210> 16
 <211> 2447
 <212> DNA
 <213> Homo Sapien

<400> 16
 cagggtccaac tgcacctcgg ttctatcgat tgaattcccc ggggatacctc 50
 tagagatccc tcgacctcga cccacgcgtc cgaacacagg tccttggtgc 100
 tgcagagaag cagttgtttt gctggaagga gggagtgcgc gggctgcccc 150
 gggctcctcc ctgccgcctc ctctcagtgg atggttccag gcaccctgtc 200
 tggggcaggg agggcacagg cctgcacatc gaaggtgggg tgggaccagg 250
 ctgccccctc cccagcatc caagtcctcc cttgggcgcc cgtggccctg 300
 cagactctca gggctaaggt cctctgttgc tttttggttc caccttagaa 350
 gaggtccgc ttgactaaga gtagcttgaa ggaggcacca tgcaggagct 400
 gcatctgtc tggtgggcgc ttctcctggg cctggctcag gcctgcctg 450
 agccctgcga ctgtggggaa aagtatggt tccagatgc cgactgtgcc 500
 taccgcgacc tagaatccgt gccgcctggc ttcccggcca atgtgactac 550
 actgagcctg tcagccaacc ggtgccagg cttgccggag ggtgccttca 600
 gggaggtgcc cctgctgcag tcgctgtggc tggcacacaa tgagatccgc 650
 acggtggccg ccggagccct ggctctctg agccatctca agagcctgga 700
 cctcagccac aatctcatct ctgactttgc ctggagcgac ctgcacaacc 750
 tcagtgcctt ccaattgtc aagatggaca gcaacgagct gaccttcac 800
 ccccgcgacg ccttccgcag cctccgtgct ctgcgctcgc tgcaactcaa 850
 ccacaaccgc ttgcacacat tggccgaggg caccttcacc ccgtcaccg 900
 cgctgtccca cctgcagatc aacgagaacc ccttcgactg cacctgcggc 950

atcgtgtggc tcaagacatg ggccctgacc acggccgtgt ccatcccga 1000
gcaggacaac atcgcttga cctcaccaca tgtgtcaag ggtacaccgc 1050
tgagccgctt gccgacctg ccatgctcgg cgccctcagt gcagctcagc 1100
taccaaccca gccaggatgg tgccgagctg cggcctgggt ttgtgctggc 1150
actgcactgt gatgtggacg ggcagccggc cctcagctt cactggcaca 1200
tccagatacc cagtggcatt gtggagatca ccagcccaaa cgtgggcact 1250
gatgggctg ccttgcctgg caccctgtg gccagctccc agccgcgctt 1300
ccaggccttt gccaatggca gcctgcttat ccccgacttt ggcaagctgg 1350
aggaaggcac ctacagctgc ctggccacca atgagctggg cagtgtgag 1400
agctcagtgg acgtggcact ggccacgccc ggtgagggtg gtgaggacac 1450
actggggcgc aggttccatg gcaaagcggg tgagggaag ggctgtata 1500
cggttgacaa cgaggtgcag ccatcagggc cggaggacaa tgtggtcatc 1550
atctacctca gccgtgctgg gaaccctgag gctgcagtcg cagaaggggt 1600
ccttgggcag ctgccccag gcctgtcct gctgggcaa agcctcctcc 1650
tcttcttctt cctcacctcc ttctagcccc acccagggtt tccctaactc 1700
ctccccttgc cctaccaat gccctttaa gtgctgcagg ggtctggggg 1750
tggcaactcc tgaggcctgc atgggtgact tcacattttc ctacctctcc 1800
ttctaacttc ttctagagca cctgctatcc ccaacttota gacctgtctc 1850
aaactagtga ctaggataga atttgatccc ctaactcact gtctgcgggtg 1900
ctcattgctg ctaacagcat tgctgtgct ctctctcag gggcagcatg 1950
ctaacggggc gacgtcctaa tccaactggg agaagcctca gtggtggaat 2000
tccaggcact gtgactgtca agctggcaag ggccaggatt gggggaatgg 2050
agctggggct tagctgggag gtggtctgaa gcagacaggg aatgggagag 2100
gaggatggga agtagacagt ggctgggatg gctctgaggc tccctggggc 2150
ctgctcaagc tctcctgct ccttgctgtt ttctgatgat ttgggggctt 2200
gggagtcctt ttgtcctcat ctgagactga aatgtgggga tccaggatgg 2250
ccttccttcc tcttaccctt cctccctcag cctgcaacct ctatcctgga 2300
acctgtcttc cctttctccc caactatgca tctgttgtct gctcctctgc 2350
aaaggccagc cagcttggga gcagcagaga aataaacagc atttctgatg 2400

ccaaaaaaaaa aaaaaaaaaa gggcgccgc gactctagag tcgacct 2447

<210> 17

<211> 428

<212> PRT

<213> Homo Sapien

<400> 17

Met	Gln	Glu	Leu	His	Leu	Leu	Trp	Trp	Ala	Leu	Leu	Leu	Gly	Leu	
1				5					10					15	
Ala	Gln	Ala	Cys	Pro	Glu	Pro	Cys	Asp	Cys	Gly	Glu	Lys	Tyr	Gly	
				20					25					30	
Phe	Gln	Ile	Ala	Asp	Cys	Ala	Tyr	Arg	Asp	Leu	Glu	Ser	Val	Pro	
				35					40					45	
Pro	Gly	Phe	Pro	Ala	Asn	Val	Thr	Thr	Leu	Ser	Leu	Ser	Ala	Asn	
				50					55					60	
Arg	Leu	Pro	Gly	Leu	Pro	Glu	Gly	Ala	Phe	Arg	Glu	Val	Pro	Leu	
				65					70					75	
Leu	Gln	Ser	Leu	Trp	Leu	Ala	His	Asn	Glu	Ile	Arg	Thr	Val	Ala	
				80					85					90	
Ala	Gly	Ala	Leu	Ala	Ser	Leu	Ser	His	Leu	Lys	Ser	Leu	Asp	Leu	
				95					100					105	
Ser	His	Asn	Leu	Ile	Ser	Asp	Phe	Ala	Trp	Ser	Asp	Leu	His	Asn	
				110					115					120	
Leu	Ser	Ala	Leu	Gln	Leu	Leu	Lys	Met	Asp	Ser	Asn	Glu	Leu	Thr	
				125					130					135	
Phe	Ile	Pro	Arg	Asp	Ala	Phe	Arg	Ser	Leu	Arg	Ala	Leu	Arg	Ser	
				140					145					150	
Leu	Gln	Leu	Asn	His	Asn	Arg	Leu	His	Thr	Leu	Ala	Glu	Gly	Thr	
				155					160					165	
Phe	Thr	Pro	Leu	Thr	Ala	Leu	Ser	His	Leu	Gln	Ile	Asn	Glu	Asn	
				170					175					180	
Pro	Phe	Asp	Cys	Thr	Cys	Gly	Ile	Val	Trp	Leu	Lys	Thr	Trp	Ala	
				185					190					195	
Leu	Thr	Thr	Ala	Val	Ser	Ile	Pro	Glu	Gln	Asp	Asn	Ile	Ala	Cys	
				200					205					210	
Thr	Ser	Pro	His	Val	Leu	Lys	Gly	Thr	Pro	Leu	Ser	Arg	Leu	Pro	
				215					220					225	
Pro	Leu	Pro	Cys	Ser	Ala	Pro	Ser	Val	Gln	Leu	Ser	Tyr	Gln	Pro	
				230					235					240	
Ser	Gln	Asp	Gly	Ala	Glu	Leu	Arg	Pro	Gly	Phe	Val	Leu	Ala	Leu	
				245					250					255	

His Cys Asp Val	Asp Gly Gln Pro Ala	Pro Gln Leu His Trp	His
260		265	270
Ile Gln Ile Pro	Ser Gly Ile Val Glu	Ile Thr Ser Pro Asn	Val
275		280	285
Gly Thr Asp Gly	Arg Ala Leu Pro Gly	Thr Pro Val Ala Ser	Ser
290		295	300
Gln Pro Arg Phe	Gln Ala Phe Ala Asn	Gly Ser Leu Leu Ile	Pro
305		310	315
Asp Phe Gly Lys	Leu Glu Glu Gly Thr	Tyr Ser Cys Leu Ala	Thr
320		325	330
Asn Glu Leu Gly	Ser Ala Glu Ser Ser	Val Asp Val Ala Leu	Ala
335		340	345
Thr Pro Gly Glu	Gly Gly Glu Asp Thr	Leu Gly Arg Arg Phe	His
350		355	360
Gly Lys Ala Val	Glu Gly Lys Gly Cys	Tyr Thr Val Asp Asn	Glu
365		370	375
Val Gln Pro Ser	Gly Pro Glu Asp Asn	Val Val Ile Ile Tyr	Leu
380		385	390
Ser Arg Ala Gly	Asn Pro Glu Ala Ala	Val Ala Glu Gly Val	Pro
395		400	405
Gly Gln Leu Pro	Pro Gly Leu Leu Leu	Leu Gly Gln Ser Leu	Leu
410		415	420
Leu Phe Phe Phe	Leu Thr Ser Phe		
425			

<210> 18
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 18
 gtggctggca cacaatgaga tc 22

<210> 19
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 19
 ccaatgtgtg caagcggttg tg 22

<210> 20
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 20
 tcaagagcct ggacctcagc cacaatctca tctctgactt tgcctggagc 50

<210> 21
 <211> 2033
 <212> DNA
 <213> Homo Sapien

<400> 21
 ccaggccggg aggcgacgcg cccagccgtc taaacgggaa cagccctggc 50
 tgaggagct gcagcgcagc agagtatctg acggcgccag gttgcgtagg 100
 tgccggcacga ggagttttcc cggcagcgag gaggtcctga gcagcatggc 150
 ccggaggagc gccttccttg ccgccgcgct ctggctctgg agcatcctcc 200
 tgtgcctgct ggcaactgcg gcggaggccg ggccgccgca ggaggagagc 250
 ctgtacctat ggatcgatgc tcaccaggca agagtactca taggatttga 300
 agaagatatc ctgattgttt cagaggggaa aatggcacct tttacacatg 350
 atttcagaaa agcgcaacag agaatgccag ctattcctgt caatatccat 400
 tccatgaatt ttacctggca agctgcaggg caggcagaat acttctatga 450
 attcctgtcc ttgcgctccc tggataaagg catcatggca gatccaaccg 500
 tcaatgtccc tctgctggga acagtgcctc acaaggcatc agttgttcaa 550
 gttggtttcc catgtcttgg aaaacaggat ggggtggcag catttgaagt 600
 ggatgtgatt gttatgaatt ctgaaggcaa caccattctc caaacacctc 650
 aaaatgctat cttctttaa acatgtcaac aagctgagtg cccaggcggg 700
 tgccgaaatg gaggcttttg taatgaaaga cgcattctgc agtgtcctga 750
 tgggttccac ggacctcact gtgagaaagc cctttgtacc ccacgatgta 800
 tgaatggtgg actttgtgtg actcctgggt tctgcatctg ccacactgga 850
 ttctatggag tgaactgtga caaagcaaac tgctcaacca cctgctttaa 900
 tggagggacc tgtttctacc ctggaaaatg tatttgccct ccaggactag 950
 agggagagca gtgtgaaatc agcaaatgcc cacaaccctg tcgaaatgga 1000
 ggtaaagca ttggtaaaag caaatgtaag tggtccaaag gttaccaggg 1050

	350		355		360
Pro Ser Leu Lys	Lys Ala Glu Glu Arg Arg Asp Pro Pro Glu Ser				
	365		370		375
Asn Tyr Ile Trp					

<210> 23
 <211> 783
 <212> DNA
 <213> Homo Sapien

<400> 23
 agaacctcag aaatgtgagt tatttgggaa tggctgtttg taaatgtcct 50
 tacgtaagcc aagaggaggt cttgacttgg ggtcccaggg gtaccgcaga 100
 tcccagggac tggagcagca ctagcaagct ctggaggatg agccaggagt 150
 ctggaattga ggctgagcca aagaccccag ggccgtctca gtctcataaa 200
 aggggatcag gcaggaggag tttgggagaa acctgagaag ggcttgattt 250
 gcagcatcat gatgggcctc tccttggcct ctgctgtgct cctggcctcc 300
 ctctgagtc tccaccttgg aactgccaca cgtgggagtg acatatccaa 350
 gacctgctgc ttccaatata gccacaagcc ccttccctgg acctgggtgc 400
 gaagctatga attcaccagt aacagctgct cccagcgggc tgtgatattc 450
 actacaaaaa gaggcaagaa agtctgtacc catccaagga aaaaatgggt 500
 gcaaaaatac atttctttac tgaaaactcc gaaacaattg tgactcagct 550
 gaattttcat ccgaggacgc ttggaccccg ctcttggctc tgcagccctc 600
 tggggagcct gcggaatctt ttctgaaggc tacatggacc cgctggggag 650
 gagagggtgt ttcctcccag agttacttta ataaaggttg ttcatagagt 700
 tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 750
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 783

<210> 24
 <211> 94
 <212> PRT
 <213> Homo Sapien

<400> 24
 Met Met Gly Leu Ser Leu Ala Ser Ala Val Leu Leu Ala Ser Leu
 1 5 10 15
 Leu Ser Leu His Leu Gly Thr Ala Thr Arg Gly Ser Asp Ile Ser
 20 25 30

Lys Thr Cys Cys Phe Gln Tyr Ser His Lys Pro Leu Pro Trp Thr
 35 40 45
 Trp Val Arg Ser Tyr Glu Phe Thr Ser Asn Ser Cys Ser Gln Arg
 50 55 60
 Ala Val Ile Phe Thr Thr Lys Arg Gly Lys Lys Val Cys Thr His
 65 70 75
 Pro Arg Lys Lys Trp Val Gln Lys Tyr Ile Ser Leu Leu Lys Thr
 80 85 90
 Pro Lys Gln Leu

<210> 25
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 25
 ggatcaggca ggaggagttt ggg 23

<210> 26
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 26
 ggatgggtac agactttctt gcc 23

<210> 27
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 27
 atgatgggcc tctccttggc ctctgctgtg ctccctggcct cccctctgag 50

<210> 28
 <211> 3552
 <212> DNA
 <213> Homo Sapien

<400> 28
 gcgagaacct ttgcacgcgc acaaactacg gggacgattt ctgattgatt 50
 tttggcgctt tcgatccacc ctctccctt ctcatgggac tttggggaca 100

aagcgtcccg accgcctcga gcgctcgagc agggcgctat ccaggagcca 150
ggacagcgtc gggaaccaga ccatggctcc tggaccccaa gacctaag 200
ttcgtcgtct tcacgtcgc ggttctgctg ccggtccggg ttgactctgc 250
caccatcccc cggcaggacg aagttcccca gcagacagtg gcccacagc 300
aacagaggcg cagcctcaag gaggaggagt gtccagcagg atctcataga 350
tcagaatata ctggagcctg taacccgtgc acagaggggtg tggattacac 400
cattgcttcc aacaatttgc cttcttgctt gctatgtaca gtttgtaa 450
caggtcaaac aaataaaagt tcctgtacca cgaccagaga caccgtgtgt 500
cagtgtgaaa aaggaagctt ccaggataaa aactcccctg agatgtgccg 550
gacgtgtaga acaggggtgc ccagagggat ggtcaagggtc agtaattgta 600
cgccccggag tgacatcaag tgcaaaaatg aatcagctgc cagttccact 650
gggaaaaccc cagcagcggg ggagacagt accaccatcc tggggatgct 700
tgcctctccc tatcactacc ttatcatcat agtgggttta gtcacattt 750
tagctgtggg tgtggttggc ttttcatgtc ggaagaaatt catttcttac 800
ctcaaaggca tctgctcagg tggaggagga ggtcccgaac gtgtgcacag 850
agtccttttc cggcggcggt catgtccttc acgagttcct gggcgagg 900
acaatgcccc caacgagacc ctgagtaaca gatacttgca gcccaccag 950
gtctctgagc aggaaatcca aggtcaggag ctggcagagc taacaggtgt 1000
gactgtagag tcgccagagg agccacagcg tctgctggaa caggcagaag 1050
ctgaaggggtg tcagaggagg aggtgctgg ttccagtga tgacgtgac 1100
tccgctgaca tcagcacctt gctggatgcc tcggcaacac tggaagaagg 1150
acatgcaaag gaaacaattc aggaccaact ggtgggctcc gaaaagctct 1200
tttatgaaga agatgaggca ggctctgcta cgtcctgcct gtgaaagaat 1250
ctcttcagga aaccagagct tcctcatatt accttttctc ctacaaagg 1300
aagcagcctg gaagaaacag tccagtactt gacccatgcc ccaacaaact 1350
ctactatcca atatggggca gcttaccaat ggtcctagaa ctttggttaac 1400
gcacttgag taatttttat gaaatactgc gtgtgataag caaacgggag 1450
aaatttatat cagattcttg gctgcatagt tatacgattg tgtattaagg 1500
gtcgttttag gccacatgcg gtggctcatg cctgtaatcc cagcactttg 1550

aaggcattgt gtgttttgtt ccgggactgg ttgggctggg acaaagttag 3050
aactgcctga agttcgcaca ttcagattgt tgtgtccatg gagttttagg 3100
aggggatggc ctttcgggtc ttcgcacttc catcctctcc cacttccatc 3150
tggcgtccca caccttgctc cctgcacttc tggatgacac aggggtgctgc 3200
tgctccttag tctttgcctt tgctgggcct tctgtgcagg agacttggtc 3250
tcaaagctca gagagagcca gtccggtccc agctcctttg tcccttcctc 3300
agaggccttc cttgaagatg catctagact accagcctta tcagtgttta 3350
agcttattcc tttaacataa gcttctgac aacatgaaat tgttgggggtt 3400
ttttggcggtt gggttgatttg tttaggtttt gctttataacc cgggcctaaat 3450
agcacataac acctggttat atatgaaata ctcatatggt tatgaccaa 3500
ataaatatga aacctcatrt taaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3550
aa 3552

<210> 29

<211> 386

<212> PRT

<213> Homo Sapien

<400> 29

Met	Gly	Leu	Trp	Gly	Gln	Ser	Val	Pro	Thr	Ala	Ser	Ser	Ala	Arg
1				5					10					15
Ala	Gly	Arg	Tyr	Pro	Gly	Ala	Arg	Thr	Ala	Ser	Gly	Thr	Arg	Pro
				20					25					30
Trp	Leu	Leu	Asp	Pro	Lys	Ile	Leu	Lys	Phe	Val	Val	Phe	Ile	Val
				35					40					45
Ala	Val	Leu	Leu	Pro	Val	Arg	Val	Asp	Ser	Ala	Thr	Ile	Pro	Arg
				50					55					60
Gln	Asp	Glu	Val	Pro	Gln	Gln	Thr	Val	Ala	Pro	Gln	Gln	Gln	Arg
				65					70					75
Arg	Ser	Leu	Lys	Glu	Glu	Glu	Cys	Pro	Ala	Gly	Ser	His	Arg	Ser
				80					85					90
Glu	Tyr	Thr	Gly	Ala	Cys	Asn	Pro	Cys	Thr	Glu	Gly	Val	Asp	Tyr
				95					100					105
Thr	Ile	Ala	Ser	Asn	Asn	Leu	Pro	Ser	Cys	Leu	Leu	Cys	Thr	Val
				110					115					120
Cys	Lys	Ser	Gly	Gln	Thr	Asn	Lys	Ser	Ser	Cys	Thr	Thr	Thr	Arg
				125					130					135
Asp	Thr	Val	Cys	Gln	Cys	Glu	Lys	Gly	Ser	Phe	Gln	Asp	Lys	Asn

				140					145					150
Ser	Pro	Glu	Met	Cys 155	Arg	Thr	Cys	Arg	Thr 160	Gly	Cys	Pro	Arg	Gly 165
Met	Val	Lys	Val	Ser 170	Asn	Cys	Thr	Pro	Arg 175	Ser	Asp	Ile	Lys	Cys 180
Lys	Asn	Glu	Ser	Ala 185	Ala	Ser	Ser	Thr	Gly 190	Lys	Thr	Pro	Ala	Ala 195
Glu	Glu	Thr	Val	Thr 200	Thr	Ile	Leu	Gly	Met 205	Leu	Ala	Ser	Pro	Tyr 210
His	Tyr	Leu	Ile	Ile 215	Ile	Val	Val	Leu	Val 220	Ile	Ile	Leu	Ala	Val 225
Val	Val	Val	Gly	Phe 230	Ser	Cys	Arg	Lys	Lys 235	Phe	Ile	Ser	Tyr	Leu 240
Lys	Gly	Ile	Cys	Ser 245	Gly	Gly	Gly	Gly	Gly 250	Pro	Glu	Arg	Val	His 255
Arg	Val	Leu	Phe	Arg 260	Arg	Arg	Ser	Cys	Pro 265	Ser	Arg	Val	Pro	Gly 270
Ala	Glu	Asp	Asn	Ala 275	Arg	Asn	Glu	Thr	Leu 280	Ser	Asn	Arg	Tyr	Leu 285
Gln	Pro	Thr	Gln	Val 290	Ser	Glu	Gln	Glu	Ile 295	Gln	Gly	Gln	Glu	Leu 300
Ala	Glu	Leu	Thr	Gly 305	Val	Thr	Val	Glu	Ser 310	Pro	Glu	Glu	Pro	Gln 315
Arg	Leu	Leu	Glu	Gln 320	Ala	Glu	Ala	Glu	Gly 325	Cys	Gln	Arg	Arg	Arg 330
Leu	Leu	Val	Pro	Val 335	Asn	Asp	Ala	Asp	Ser 340	Ala	Asp	Ile	Ser	Thr 345
Leu	Leu	Asp	Ala	Ser 350	Ala	Thr	Leu	Glu	Glu 355	Gly	His	Ala	Lys	Glu 360
Thr	Ile	Gln	Asp	Gln 365	Leu	Val	Gly	Ser	Glu 370	Lys	Leu	Phe	Tyr	Glu 375
Glu	Asp	Glu	Ala	Gly 380	Ser	Ala	Thr	Ser	Cys 385	Leu				

<210> 30

<211> 50

<212> DNA

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> Synthetic oligonucleotide probe

<400> 30
cataaaaagtt cctgcaccat gaccagagac acagtgtgtc agtgtaaaga 50

<210> 31
<211> 963
<212> DNA
<213> Homo Sapien

<400> 31
gcggcacctg gaagatgcgc ccattggctg gtggcctgct caaggtggtg 50
ttcgtggtct tcgcctcctt gtgtgcctgg tattcggggt acctgctcgc 100
agagctcatt ccagatgcac ccctgtccag tgctgcctat agcatccgca 150
gcatcgggga gaggcctgtc ctcaaagctc cagtcccca aaggcaaaaa 200
tgtgaccact ggactccctg cccatctgac acctatgcct acaggttact 250
cagcggaggt ggcagaagca agtacgcaa aatctgcttt gaggataacc 300
tactttatggg agaacagctg ggaaatgttg ccagaggaat aaacattgcc 350
attgtcaact atgtaactgg gaatgtgaca gcaacacgat gttttgatat 400
gtatgaaggc gataactctg gaccgatgac aaagtttatt cagagtgtctg 450
ctccaaaatc cctgctcttc atggtgacct atgacgacgg aagcacaaga 500
ctgaataacg atgccaagaa tgccatagaa gcacttggaa gtaaagaaat 550
caggaacatg aaattcaggt ctagctgggt atttattgca gcaaaaggct 600
tggaactccc ttccgaaatt cagagagaaa agatcaacca ctctgatgct 650
aagaacaaca gatattctgg ctggcctgca gagatccaga tagaaggctg 700
catacccaaa gaacgaagct gacactgcag ggtcctgagt aaatgtgttc 750
tgtataaaca aatgcagctg gaatcgctca agaattctat ttttctaaat 800
ccaacagccc atatttgatg agtatcttgg gtttggtgta aaccaatgaa 850
catttgctag ttgtatcaaa tcttggtacg cagtattttt ataccagtat 900
tttatgtagt gaagatgtca attagcagga aactaaaatg aatggaaatt 950
cttaaaaaaa aaa 963

<210> 32
<211> 235
<212> PRT
<213> Homo Sapien

<400> 32
Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Phe Val Val
1 5 10 15

Phe	Ala	Ser	Leu	Cys	Ala	Trp	Tyr	Ser	Gly	Tyr	Leu	Leu	Ala	Glu	20	25	30
Leu	Ile	Pro	Asp	Ala	Pro	Leu	Ser	Ser	Ala	Ala	Tyr	Ser	Ile	Arg	35	40	45
Ser	Ile	Gly	Glu	Arg	Pro	Val	Leu	Lys	Ala	Pro	Val	Pro	Lys	Arg	50	55	60
Gln	Lys	Cys	Asp	His	Trp	Thr	Pro	Cys	Pro	Ser	Asp	Thr	Tyr	Ala	65	70	75
Tyr	Arg	Leu	Leu	Ser	Gly	Gly	Gly	Arg	Ser	Lys	Tyr	Ala	Lys	Ile	80	85	90
Cys	Phe	Glu	Asp	Asn	Leu	Leu	Met	Gly	Glu	Gln	Leu	Gly	Asn	Val	95	100	105
Ala	Arg	Gly	Ile	Asn	Ile	Ala	Ile	Val	Asn	Tyr	Val	Thr	Gly	Asn	110	115	120
Val	Thr	Ala	Thr	Arg	Cys	Phe	Asp	Met	Tyr	Glu	Gly	Asp	Asn	Ser	125	130	135
Gly	Pro	Met	Thr	Lys	Phe	Ile	Gln	Ser	Ala	Ala	Pro	Lys	Ser	Leu	140	145	150
Leu	Phe	Met	Val	Thr	Tyr	Asp	Asp	Gly	Ser	Thr	Arg	Leu	Asn	Asn	155	160	165
Asp	Ala	Lys	Asn	Ala	Ile	Glu	Ala	Leu	Gly	Ser	Lys	Glu	Ile	Arg	170	175	180
Asn	Met	Lys	Phe	Arg	Ser	Ser	Trp	Val	Phe	Ile	Ala	Ala	Lys	Gly	185	190	195
Leu	Glu	Leu	Pro	Ser	Glu	Ile	Gln	Arg	Glu	Lys	Ile	Asn	His	Ser	200	205	210
Asp	Ala	Lys	Asn	Asn	Arg	Tyr	Ser	Gly	Trp	Pro	Ala	Glu	Ile	Gln	215	220	225
Ile	Glu	Gly	Cys	Ile	Pro	Lys	Glu	Arg	Ser						230	235	

<210> 33

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 33

ggctggcctg cagagatc 18

<210> 34

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 34
aatgtgacca ctggactccc 20

<210> 35
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 35
aggcttgga cttcccttc 18

<210> 36
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 36
aagattcttg agcgattcca gctg 24

<210> 37
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 37
aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 38
<211> 1215
<212> DNA
<213> Homo Sapien

<400> 38
ccggggaggg gagggcccgt cccgcccctc cccgtctctc cccgcccctc 50
cccgtccctc ccgccgaagc tccgtcccgc ccgcgggccc gctccgccct 100
cacctcccgg ccgcggctgc cctctgcccg ggttggtcaa gatggagggc 150
gctccaccgg ggtcgctcgc cctccggctc ctgctgttcg tggcgctacc 200
cgctccggc tggctgacga cgggcgcccc cgagccgccc ccgctgtccg 250

Val	Val	Leu	Asn	Ile	Thr	Tyr	Glu	Ser	Gly	Gln	Val	Tyr	Val	Asn	65	70	75
Asp	Leu	Pro	Val	Asn	Ser	Gly	Val	Thr	Arg	Ile	Ser	Cys	Gln	Thr	80	85	90
Leu	Ile	Val	Lys	Asn	Glu	Asn	Leu	Glu	Asn	Leu	Glu	Glu	Lys	Glu	95	100	105
Tyr	Phe	Gly	Ile	Val	Ser	Val	Arg	Ile	Leu	Val	His	Glu	Trp	Pro	110	115	120
Met	Thr	Ser	Gly	Ser	Ser	Leu	Gln	Leu	Ile	Val	Ile	Gln	Glu	Glu	125	130	135
Val	Val	Glu	Ile	Asp	Gly	Lys	Gln	Val	Gln	Gln	Lys	Asp	Val	Thr	140	145	150
Glu	Ile	Asp	Ile	Leu	Val	Lys	Asn	Arg	Gly	Val	Leu	Arg	His	Ser	155	160	165
Asn	Tyr	Thr	Leu	Pro	Leu	Glu	Glu	Ser	Met	Leu	Tyr	Ser	Ile	Ser	170	175	180
Arg	Asp	Ser	Asp	Ile	Leu	Phe	Thr	Leu	Pro	Asn	Leu	Ser	Lys	Lys	185	190	195
Glu	Ser	Val	Ser	Ser	Leu	Gln	Thr	Thr	Ser	Gln	Tyr	Leu	Ile	Arg	200	205	210
Asn	Val	Glu	Thr	Thr	Val	Asp	Glu	Asp	Val	Leu	Pro	Gly	Lys	Leu	215	220	225
Pro	Glu	Thr	Pro	Leu	Arg	Ala	Glu	Pro	Pro	Ser	Ser	Tyr	Lys	Val	230	235	240
Met	Cys	Gln	Trp	Met	Glu	Lys	Phe	Arg	Lys	Asp	Leu	Cys	Arg	Phe	245	250	255
Trp	Ser	Asn	Val	Phe	Pro	Val	Phe	Phe	Gln	Phe	Leu	Asn	Ile	Met	260	265	270
Val	Val	Gly	Ile	Thr	Gly	Ala	Ala	Val	Val	Ile	Thr	Ile	Leu	Lys	275	280	285
Val	Phe	Phe	Pro	Val	Ser	Glu	Tyr	Lys	Gly	Ile	Leu	Gln	Leu	Asp	290	295	300
Lys	Val	Asp	Val	Ile	Pro	Val	Thr	Ala	Ile	Asn	Leu	Tyr	Pro	Asp	305	310	315
Gly	Pro	Glu	Lys	Arg	Ala	Glu	Asn	Leu	Glu	Asp	Lys	Thr	Cys	Ile	320	325	330

<210> 40

<211> 2498

<212> DNA

<213> Homo Sapien

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 43

gggtgggata gacctgcg 18

<210> 44

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 44

aaggccaaga aggctgcc 18

<210> 45

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 45

ccaggcctgc agaccag 18

<210> 46

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46

cttcctcagt ccttccagga tatc 24

<210> 47

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 47

aagctggata tcctccgtgt tgtc 24

<210> 48

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

50										55					60				
Val	Lys	Ile	Asp	Leu	Phe	Glu	Arg	Glu	Glu	Val	Gly	Gly	Arg	Leu					
				65					70					75					
Ala	Thr	Met	Met	Val	Gln	Gly	Gln	Glu	Tyr	Glu	Ala	Gly	Gly	Ser					
				80					85					90					
Val	Ile	His	Pro	Leu	Asn	Leu	His	Met	Lys	Arg	Phe	Val	Lys	Asp					
				95					100					105					
Leu	Gly	Leu	Ser	Ala	Val	Gln	Ala	Ser	Gly	Gly	Leu	Leu	Gly	Ile					
				110					115					120					
Tyr	Asn	Gly	Glu	Thr	Leu	Val	Phe	Glu	Glu	Ser	Asn	Trp	Phe	Ile					
				125					130					135					
Ile	Asn	Val	Ile	Lys	Leu	Val	Trp	Arg	Tyr	Gly	Phe	Gln	Ser	Leu					
				140					145					150					
Arg	Met	His	Met	Trp	Val	Glu	Asp	Val	Leu	Asp	Lys	Phe	Met	Arg					
				155					160					165					
Ile	Tyr	Arg	Tyr	Gln	Ser	His	Asp	Tyr	Ala	Phe	Ser	Ser	Val	Glu					
				170					175					180					
Lys	Leu	Leu	His	Ala	Leu	Gly	Gly	Asp	Asp	Phe	Leu	Gly	Met	Leu					
				185					190					195					
Asn	Arg	Thr	Leu	Leu	Glu	Thr	Leu	Gln	Lys	Ala	Gly	Phe	Ser	Glu					
				200					205					210					
Lys	Phe	Leu	Asn	Glu	Met	Ile	Ala	Pro	Val	Met	Arg	Val	Asn	Tyr					
				215					220					225					
Gly	Gln	Ser	Thr	Asp	Ile	Asn	Ala	Phe	Val	Gly	Ala	Val	Ser	Leu					
				230					235					240					
Ser	Cys	Ser	Asp	Ser	Gly	Leu	Trp	Ala	Val	Glu	Gly	Gly	Asn	Lys					
				245					250					255					
Leu	Val	Cys	Ser	Gly	Leu	Leu	Gln	Ala	Ser	Lys	Ser	Asn	Leu	Ile					
				260					265					270					
Ser	Gly	Ser	Val	Met	Tyr	Ile	Glu	Glu	Lys	Thr	Lys	Thr	Lys	Tyr					
				275					280					285					
Thr	Gly	Asn	Pro	Thr	Lys	Met	Tyr	Glu	Val	Val	Tyr	Gln	Ile	Gly					
				290					295					300					
Thr	Glu	Thr	Arg	Ser	Asp	Phe	Tyr	Asp	Ile	Val	Leu	Val	Ala	Thr					
				305					310					315					
Pro	Leu	Asn	Arg	Lys	Met	Ser	Asn	Ile	Thr	Phe	Leu	Asn	Phe	Asp					
				320					325					330					
Pro	Pro	Ile	Glu	Glu	Phe	His	Gln	Tyr	Tyr	Gln	His	Ile	Val	Thr					
				335					340					345					

acccctattg atagaaaaca tgaagaaagc attaagactt attcagtcag 550
 agctataaga gatgatggaa aaaagccttc acttcaaaga agtcaaattt 600
 catgaagaaa acctctggca cattgacaaa tactaaatgt gcaagtatat 650
 agatttttgta atattactat ttagtttttt taatgtgttt gcaatagtct 700
 tattaataata aatgtttttt aaatctga 728

<210> 54
 <211> 166
 <212> PRT
 <213> Homo Sapien

<400> 54
 Met Met Leu His Ser Ala Leu Gly Leu Cys Leu Leu Leu Val Thr
 1 5 10 15
 Val Ser Ser Asn Leu Ala Ile Ala Ile Lys Lys Glu Lys Arg Pro
 20 25 30
 Pro Gln Thr Leu Ser Arg Gly Trp Gly Asp Asp Ile Thr Trp Val
 35 40 45
 Gln Thr Tyr Glu Glu Gly Leu Phe Tyr Ala Gln Lys Ser Lys Lys
 50 55 60
 Pro Leu Met Val Ile His His Leu Glu Asp Cys Gln Tyr Ser Gln
 65 70 75
 Ala Leu Lys Lys Val Phe Ala Gln Asn Glu Glu Ile Gln Glu Met
 80 85 90
 Ala Gln Asn Lys Phe Ile Met Leu Asn Leu Met His Glu Thr Thr
 95 100 105
 Asp Lys Asn Leu Ser Pro Asp Gly Gln Tyr Val Pro Arg Ile Met
 110 115 120
 Phe Val Asp Pro Ser Leu Thr Val Arg Ala Asp Ile Ala Gly Arg
 125 130 135
 Tyr Ser Asn Arg Leu Tyr Thr Tyr Glu Pro Arg Asp Leu Pro Leu
 140 145 150
 Leu Ile Glu Asn Met Lys Lys Ala Leu Arg Leu Ile Gln Ser Glu
 155 160 165
 Leu

<210> 55
 <211> 537
 <212> DNA
 <213> Homo Sapien

<400> 55

acgtctgtgc cacttgccat gaacatgcca catgccagca aagagaagg 200
aagaagatct gtatttgcaa ctatggattt gtagggaacg ggaggactca 250
gtgtgttgat aaaaatgagt gccagtttgg agccactctt gtctgtggga 300
accacacatc ttgccacaa acccccgggg gcttctattg catttgctg 350
gaaggatata gagccacaaa caacaacaag acattcattc ccaacgatgg 400
caccttttgt acagacatag atgagtgtga agtttctggc ctgtgcaggc 450
atggagggcg atgcgtgaac actcatggga gctttgaatg ctactgtatg 500
gatggatact tgccaaggaa tggacctgaa cttttccacc cgaccaccga 550
tgccacatca tgcacagaaa tagactgtgg taccctcctt gaggttccag 600
atggctatat cataggaaat tatacgtcta gtctgggcag ccaggttcgt 650
tatgcttgca gagaaggatt cttcagtgtt ccagaagata cagtttcaag 700
ctgcacaggc ctgggcacat gggagtcccc aaaattacat tgccaagaga 750
tcaactgtgg caaccctcca gaaatgcggc acgccatctt ggtaggaaat 800
cacagctcca ggctgggcgg tgtggctcgc tatgtctgtc aagagggctt 850
tgagagccct ggaggaaaga tcacttctgt ttgcacagag aaaggcacct 900
ggagagaaag tactttaaca tgcacagaaa ttctgacaaa gattaatgat 950
gtatcactgt ttaatgatac ctgtgtgaga tggcaaataa actcaagaag 1000
aataaacccc aagatctcat atgtgatata cataaaagga caacggttgg 1050
accctatgga atcagttcgt gaggagacag tcaacttgac cacagacagc 1100
aggaccccg aagtgtgcct agccctgtac ccaggcacca actacaccgt 1150
gaacatctcc acagcacctc ccaggcgctc gatgccagcc gtcacgggtt 1200
tccagacagc tgaagttgat ctcttagaag atgatggaag tttcaatatt 1250
tcaatattta atgaaacttg ttgaaattg aacaggcggt ctaggaaagt 1300
tggatcagaa cacatgtacc aatttaccgt tctgggtcag aggtggtatc 1350
tggctaactt ttctcatgca acatcgttta acttcacaa gagggaaaca 1400
gtgcctgtag tgtgtttgga tctgtaccct acgactgatt atacggtgaa 1450
tgtgaccctg ctgagatctc ctaagcggca ctcagtgcaa ataacaatag 1500
caactcccc agcagtaaaa cagaccatca gtaacatttc aggatttaat 1550
gaaacctgct tgagatggag aagcatcaag acagctgata tggaggagat 1600

gtatttattc cacatttggg gccagagatg gtatcagaag gaatttgccc 1650
 aggaaatgac ctttaatatc agtagcagca gccgagatcc cgaggtgtgc 1700
 ttggacctac gtccgggtac caactacaat gtcagtctcc gggctctgtc 1750
 ttcggaactt cctgtgggtca tctccctgac aaccagata acagagcctc 1800
 ccctcccgga agtagaattt ttacgggtgc acagaggacc tctaccacgc 1850
 ctgagactga ggaaagccaa ggagaaaaat ggaccaatca gttcatatca 1900
 ggtgttagtg cttcccttgg ccctccaaag cacattttct tgtgattctg 1950
 aaggcgcttc ctccctcttt agcaacgcct ctgatgctga tggatactg 2000
 gctgcagaac tactggccaa agatgttcca gatgatgcca tggagatacc 2050
 tataggagac aggtgttact atggggaata ttataatgca cccttgaaaa 2100
 gagggagtga ttactgcatt atattacgaa tcacaagtga atggaataag 2150
 gtgagaagac actcctgtgc agtttgggct cagggtgaaag attcgtcact 2200
 catgctgctg cagatggcgg gtgttggact gggttccctg gctgttgtga 2250
 tcattctcac attcctctcc ttctcagcgg tgtgatggca gatggacact 2300
 gagtggggag gatgcactgc tgctgggcag gtgttctggc agcttctcag 2350
 gtgcccgcac agaggctccg tgtgacttcc gtccaggag catgtgggcc 2400
 tgcaactttc tccattccca gctgggcccc attcctggat ttaagatgg 2450
 ggctatccct gaggagtac cataaggaga aaactcagga attctgagtc 2500
 ttccctgcta caggaccagt tctgtgcaat gaacttgaga ctccctgatgt 2550
 acactgtgat attgaccgaa ggctacatac agatctgtga atcttggtg 2600
 ggacttcctc tgagtgatgc ctgaggggtca gctcctctag acattgactg 2650
 caagagaatc tctgcaacct cctatataaa agcatttctg ttaattcatt 2700
 cagaatccat tctttacaat atgcagtgag atgggcttaa gtttgggcta 2750
 gagtttgact ttatgaagga ggtcattgaa aaagagaaca gtgacgtagg 2800
 caaatgtttc aagcacttta gaaacagtac ttttctata attagttgat 2850
 atactaatga gaaaatatac tagcctggcc atgccaataa gtttctgct 2900
 gtgtctgtta ggcagcattg ctttgatgca atttctattg tcctatatat 2950
 tcaaaagtaa tgtctacatt ccagtaaaaa tatcccgtaa ttaaaaa 2997

<210> 58
 <211> 747

<212> PRT

<213> Homo Sapien

<400> 58

Met	Gly	Arg	Gly	Pro	Trp	Asp	Ala	Gly	Pro	Ser	Arg	Arg	Leu	Leu	
1				5					10					15	
Pro	Leu	Leu	Leu	Leu	Leu	Gly	Leu	Ala	Arg	Gly	Ala	Ala	Gly	Ala	
				20					25					30	
Pro	Gly	Pro	Asp	Gly	Leu	Asp	Val	Cys	Ala	Thr	Cys	His	Glu	His	
				35					40					45	
Ala	Thr	Cys	Gln	Gln	Arg	Glu	Gly	Lys	Lys	Ile	Cys	Ile	Cys	Asn	
				50					55					60	
Tyr	Gly	Phe	Val	Gly	Asn	Gly	Arg	Thr	Gln	Cys	Val	Asp	Lys	Asn	
				65					70					75	
Glu	Cys	Gln	Phe	Gly	Ala	Thr	Leu	Val	Cys	Gly	Asn	His	Thr	Ser	
				80					85					90	
Cys	His	Asn	Thr	Pro	Gly	Gly	Phe	Tyr	Cys	Ile	Cys	Leu	Glu	Gly	
				95					100					105	
Tyr	Arg	Ala	Thr	Asn	Asn	Asn	Lys	Thr	Phe	Ile	Pro	Asn	Asp	Gly	
				110					115					120	
Thr	Phe	Cys	Thr	Asp	Ile	Asp	Glu	Cys	Glu	Val	Ser	Gly	Leu	Cys	
				125					130					135	
Arg	His	Gly	Gly	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Phe	Glu	Cys	
				140					145					150	
Tyr	Cys	Met	Asp	Gly	Tyr	Leu	Pro	Arg	Asn	Gly	Pro	Glu	Pro	Phe	
				155					160					165	
His	Pro	Thr	Thr	Asp	Ala	Thr	Ser	Cys	Thr	Glu	Ile	Asp	Cys	Gly	
				170					175					180	
Thr	Pro	Pro	Glu	Val	Pro	Asp	Gly	Tyr	Ile	Ile	Gly	Asn	Tyr	Thr	
				185					190					195	
Ser	Ser	Leu	Gly	Ser	Gln	Val	Arg	Tyr	Ala	Cys	Arg	Glu	Gly	Phe	
				200					205					210	
Phe	Ser	Val	Pro	Glu	Asp	Thr	Val	Ser	Ser	Cys	Thr	Gly	Leu	Gly	
				215					220					225	
Thr	Trp	Glu	Ser	Pro	Lys	Leu	His	Cys	Gln	Glu	Ile	Asn	Cys	Gly	
				230					235					240	
Asn	Pro	Pro	Glu	Met	Arg	His	Ala	Ile	Leu	Val	Gly	Asn	His	Ser	
				245					250					255	
Ser	Arg	Leu	Gly	Gly	Val	Ala	Arg	Tyr	Val	Cys	Gln	Glu	Gly	Phe	
				260					265					270	

cctcttgaca gacatagcga gccac 25

<210> 61

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 61

cactcttgtc tgtgggaacc acacatcttg ccacaactgt ggc 43

<210> 62

<211> 2015

<212> DNA

<213> Homo Sapien

<400> 62

ggaaaaggta cccgcgagag acagccagca gttctgtgga gcagcgggtgg 50
ccggctagga tgggctgtct ctgggggtctg gctctgcccc ttttcttctt 100
ctgctgggag gttgggggtct ctgggagctc tgcaggcccc agcaccgcga 150
gagcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250
ctcttctagg gcctcaacct cagccggccc cattccagaa gcagagacca 300
ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
acatctocca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400
cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
caggcagtga tcccaggaa gccatctttg acaccctttg caccgatgac 500
agctctgaag aggcaaagac actcacaatg gacatattga cattggctca 550
cacctccaca gaagctaagg gcctgtctc agagagcagt gcctcttccg 600
acggccccca tccagtcac accccgtcac gggcctcaga gagcagcgcc 650
tcttccgacg gccccatcc agtcatcacc ccgtcacggg cctcagagag 700
cagcgctct tccgacggcc cccatccagt catcaccccg tcatggtccc 750
cgggatctga tgtcactctc ctgctgaag ccttggtgac tgtcacaaac 800
atcgaggtta ttaattgcag catcacagaa atagaaacaa caacttccag 850
catccctggg gcctcagaca tagatctcat cccacaggaa ggggtgaagg 900
cctcgccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
ccacacatca ctgaggtcac agcctctgcc gagaccctgt ccacagccgg 1000

	50		55		60
Ser Ala Glu Thr	Ser Ser Arg Ala Ser Thr	Pro Ala Gly Pro Ile			
	65	70		75	
Pro Glu Ala Glu	Thr Arg Gly Ala Lys Arg	Ile Ser Pro Ala Arg			
	80	85		90	
Glu Thr Arg Ser	Phe Thr Lys Thr Ser	Pro Asn Phe Met Val Leu			
	95	100		105	
Ile Ala Thr Ser	Val Glu Thr Ser Ala	Ala Ser Gly Ser Pro Glu			
	110	115		120	
Gly Ala Gly Met	Thr Thr Val Gln Thr	Ile Thr Gly Ser Asp Pro			
	125	130		135	
Glu Glu Ala Ile	Phe Asp Thr Leu Cys	Thr Asp Asp Ser Ser Glu			
	140	145		150	
Glu Ala Lys Thr	Leu Thr Met Asp Ile	Leu Thr Leu Ala His Thr			
	155	160		165	
Ser Thr Glu Ala	Lys Gly Leu Ser Ser	Glu Ser Ser Ala Ser Ser			
	170	175		180	
Asp Gly Pro His	Pro Val Ile Thr Pro	Ser Arg Ala Ser Glu Ser			
	185	190		195	
Ser Ala Ser Ser	Asp Gly Pro His Pro	Val Ile Thr Pro Ser Arg			
	200	205		210	
Ala Ser Glu Ser	Ser Ala Ser Ser Asp	Gly Pro His Pro Val Ile			
	215	220		225	
Thr Pro Ser Trp	Ser Pro Gly Ser Asp	Val Thr Leu Leu Ala Glu			
	230	235		240	
Ala Leu Val Thr	Val Thr Asn Ile Glu	Val Ile Asn Cys Ser Ile			
	245	250		255	
Thr Glu Ile Glu	Thr Thr Thr Ser Ser	Ile Pro Gly Ala Ser Asp			
	260	265		270	
Ile Asp Leu Ile	Pro Thr Glu Gly Val	Lys Ala Ser Ser Thr Ser			
	275	280		285	
Asp Pro Pro Ala	Leu Pro Asp Ser Thr	Glu Ala Lys Pro His Ile			
	290	295		300	
Thr Glu Val Thr	Ala Ser Ala Glu Thr	Leu Ser Thr Ala Gly Thr			
	305	310		315	
Thr Glu Ser Ala	Ala Pro His Ala Thr	Val Gly Thr Pro Leu Pro			
	320	325		330	
Thr Asn Ser Ala	Thr Glu Arg Glu Val	Thr Ala Pro Gly Ala Thr			
	335	340		345	

Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu
				350					355					360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val
				365					370					375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly
				380					385					390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro
				395					400					405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr
				410					415					420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro
				425					430					435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr
				440					445					450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met
				455					460					465
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro
				470					475					480
Gln	Thr													

<210> 64
 <211> 1252
 <212> DNA
 <213> Homo Sapien

<400> 64
 gcctctgaat tgttgggcag tctggcagtg gagctctccc cggtctgaca 50
 gccactccag aggccatgct tcgtttcttg ccagatttgg ctttcagctt 100
 cctgttaatt ctggctttgg gccaggcagt ccaatttcaa gaatatgtct 150
 ttctccaatt tctgggctta gataaggcgc cttcacccca gaagttccaa 200
 cctgtgcctt atatcttgaa gaaaattttc caggatcgcg aggcagcagc 250
 gaccactggg gtctcccag acttatgcta cgtaaaggag ctgggcgtcc 300
 gcgggaatgt acttcgcttt ctcccagacc aaggtttctt tctttaccca 350
 aagaaaattt cccaagcttc ctctgcctg cagaagctcc tctactttaa 400
 cctgtctgcc atcaaagaaa gggaacagtt gacattggcc cagctgggccc 450
 tggacttggg gcccaattct tactataacc tgggaccaga gctggaactg 500
 gctctgttcc tgggttcagga gcctcatgtg tggggccaga ccaccctaa 550

gccaggtaaa atgtttgtgt tgcggtcagt cccatggcca caaggtgctg 600
 ttcacttcaa cctgctggat gtagctaagg attggaatga caacccccgg 650
 aaaaatttcg ggttattcct ggagatactg gtcaaagaag atagagactc 700
 aggggtgaat tttcagcctg aagacacctg tgccagacta agatgctccc 750
 ttcattgcttc cctgctgggtg gtgactctca accctgatca gtgccaccct 800
 tctcggaaaa ggagagcagc catccctgtc cccaagcttt cttgtaagaa 850
 cctctgccac cgtcaccagc tattcattaa cttccgggac ctgggttggc 900
 acaagtggat cattgcccc aaggggttca tggcaaatta ctgccatgga 950
 gagtgtccct tctcactgac catctctctc aacagctcca attatgcttt 1000
 catgcaagcc ctgatgcatg ccgttgacct agagatcccc caggctgtgt 1050
 gtatccccac caagctgtct cccatttcca tgctctacca ggacaataat 1100
 gacaatgtca ttctacgaca ttatgaagac atggtagtcg atgaatgtgg 1150
 gtgtgggtag gatgtcagaa atgggaatag aaggagtgtt cttagggtaa 1200
 atcttttaat aaaactacct atctggttta tgaccactta gatcgaaatg 1250
 tc 1252

<210> 65

<211> 364

<212> PRT

<213> Homo Sapien

<400> 65

Met	Leu	Arg	Phe	Leu	Pro	Asp	Leu	Ala	Phe	Ser	Phe	Leu	Leu	Ile
1				5					10					15
Leu	Ala	Leu	Gly	Gln	Ala	Val	Gln	Phe	Gln	Glu	Tyr	Val	Phe	Leu
			20					25						30
Gln	Phe	Leu	Gly	Leu	Asp	Lys	Ala	Pro	Ser	Pro	Gln	Lys	Phe	Gln
			35					40						45
Pro	Val	Pro	Tyr	Ile	Leu	Lys	Lys	Ile	Phe	Gln	Asp	Arg	Glu	Ala
			50					55						60
Ala	Ala	Thr	Thr	Gly	Val	Ser	Arg	Asp	Leu	Cys	Tyr	Val	Lys	Glu
			65					70						75
Leu	Gly	Val	Arg	Gly	Asn	Val	Leu	Arg	Phe	Leu	Pro	Asp	Gln	Gly
			80					85						90
Phe	Phe	Leu	Tyr	Pro	Lys	Lys	Ile	Ser	Gln	Ala	Ser	Ser	Cys	Leu
			95					100						105
Gln	Lys	Leu	Leu	Tyr	Phe	Asn	Leu	Ser	Ala	Ile	Lys	Glu	Arg	Glu

<220>
 <223> Synthetic oligonucleotide probe

 <400> 66
 gtctgacagc cactccagag 20

 <210> 67
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 67
 tctccaattt ctgggcttag ataaggcgcc ttcaccccag aagttcc 47

 <210> 68
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 68
 gtcccagggt atagtaagaa ttgg 24

 <210> 69
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 69
 gtgttgcggt cagtcccatg 20

 <210> 70
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 70
 gctgtctccc atttccatgc 20

 <210> 71
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

[illegible][illegible][illegible]

tccctaagtc cctctcttta aagaacttct gcgggtcaga ctctgaagcc 2750
gagttgctgt gggcgtgccc ggaagcagag cgccacactc gctgcttaag 2800
ctccccagc tctttccaga aaacattaaa ctcagaattg tgttttcaa 2849

<210> 73
<211> 281
<212> PRT
<213> Homo Sapien

<400> 73
Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu
1 5 10 15
Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val
20 25 30
Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
35 40 45
Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
50 55 60
Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
65 70 75
Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
80 85 90
Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
95 100 105
Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly
110 115 120
Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly
125 130 135
Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val
140 145 150
Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val
155 160 165
Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met
170 175 180
Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe
185 190 195
Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His
200 205 210
Ile Met Lys Asn Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val
215 220 225
Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu

230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg	Leu Tyr Lys Gly Glu Arg	
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu	Asp Thr Tyr Ile Thr Phe	
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr	Glu Pro	
275	280	

<210> 74
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 74
 tacaggccca gtcaggacca gggg 24

<210> 75
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 75
 ctgaagaagt agaggccggg cacg 24

<210> 76
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 76
 cccggtgctt gcgctgctgt gaccccggtta cctccatgta cccgg 45

<210> 77
 <211> 1042
 <212> DNA
 <213> Homo Sapien

<400> 77
 gaattcggca cgagggaaga agagaaagaa aatctccggg gctgctggga 50
 gcatataaag aagccctgtg gccttgctgg ttttaccatc cagaccagag 100
 tcaggccaca gacggacatg gctgctcaag gctgggtccat gtcctgctg 150
 gctgtcctta acctaggcat cttcgctccgt ccctgtgaca ctcaagagct 200

Arg	Phe	Leu	Pro	Glu	Asp	Leu	Lys	Gln	Lys	Glu	Phe	Pro	Pro	Ala
				95					100					105
Met	Lys	Leu	Leu	Tyr	Ser	Val	Glu	His	Glu	Lys	Pro	Leu	Tyr	Leu
				110					115					120
Ser	Phe	Gly	Arg	Pro	Glu	Asn	Lys	Arg	Ile	Phe	Pro	Phe	Pro	Ile
				125					130					135
Arg	Glu	Thr	Ser	Arg	His	Phe	Ala	Asp	Leu	Ala	His	Asn	Ser	Asp
				140					145					150
Arg	Asn	Phe	Leu	Arg	Asp	Ser	Ser	Glu	Val	Ser	Leu	Thr	Gly	Ser
				155					160					165

Asp Ala

<210> 79
 <211> 798
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 794
 <223> unknown base

<400> 79
 cagacatggc tcagtcactg gctctgagcc tccttatacct gggtctggcc 50
 tttggcatcc ccaggaccca aggcagtgat ggaggggctc aggactgttg 100
 cctcaagtac agccaaagga agattcccgc caaggttgtc cgcagctacc 150
 ggaagcagga accaagctta ggctgctcca tcccagctat cctgttcttg 200
 ccccgcaagc gctctcaggc agagctatgt gcagacccaa aggagctctg 250
 ggtgcagcag ctgatgcagc atctggacaa gacaccatcc ccacagaaac 300
 cagcccaggg ctgcaggaag gacagggggg cctccaagac tggcaagaaa 350
 ggaaagggct ccaaaggctg caagaggact gagcgggtcac agaccctaa 400
 agggccatag cccagtgagc agcctggagc cctggagacc ccaccagcct 450
 caccagcgct tgaagcctga acccaagatg caagaaggag gctatgctca 500
 ggggcccctgg agcagccacc ccattgctggc cttgccacac tctttctcct 550
 gctttaacca ccccatctgc attcccagct ctaccctgca tggctgagct 600
 gccacagca ggccaggtcc agagagaccg aggagggaga gtctcccagg 650
 gagcatgaga ggaggcagca ggactgtccc cttgaaggag aatcatcagg 700
 accctggacc tgatacggct cccagctaca cccacctct tccttgtaaa 750

tatgatttat acctaactga ataaaaagct gttctgtctt cccnccca 798

<210> 80

<211> 134

<212> PRT

<213> Homo Sapien

<400> 80

Met	Ala	Gln	Ser	Leu	Ala	Leu	Ser	Leu	Leu	Ile	Leu	Val	Leu	Ala
1				5					10					15

Phe	Gly	Ile	Pro	Arg	Thr	Gln	Gly	Ser	Asp	Gly	Gly	Ala	Gln	Asp
				20					25					30

Cys	Cys	Leu	Lys	Tyr	Ser	Gln	Arg	Lys	Ile	Pro	Ala	Lys	Val	Val
				35					40					45

Arg	Ser	Tyr	Arg	Lys	Gln	Glu	Pro	Ser	Leu	Gly	Cys	Ser	Ile	Pro
				50					55					60

Ala	Ile	Leu	Phe	Leu	Pro	Arg	Lys	Arg	Ser	Gln	Ala	Glu	Leu	Cys
				65					70					75

Ala	Asp	Pro	Lys	Glu	Leu	Trp	Val	Gln	Gln	Leu	Met	Gln	His	Leu
				80					85					90

Asp	Lys	Thr	Pro	Ser	Pro	Gln	Lys	Pro	Ala	Gln	Gly	Cys	Arg	Lys
				95					100					105

Asp	Arg	Gly	Ala	Ser	Lys	Thr	Gly	Lys	Lys	Gly	Lys	Gly	Ser	Lys
				110					115					120

Gly	Cys	Lys	Arg	Thr	Glu	Arg	Ser	Gln	Thr	Pro	Lys	Gly	Pro
				125					130				

<210> 81

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 81

agacatggct cagtcactgg 20

<210> 82

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 82

gacccctaaa gggccatag 19

<210> 83

<211> 924
 <212> DNA
 <213> Homo Sapien

<400> 83
 aaggagcagc ccgcaagcac caagtgagag gcatgaagtt acagtgtggt 50
 tccctttggc tcctgggtac aatactgata ttgtgctcag tagacaacca 100
 cgggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
 gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaata 200
 gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
 tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300
 tcaaggatca tcaggagcca aacccccaaa tcttgagaaa aatcagcagc 350
 attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
 acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
 tccatgacaa ctatgatcag ctggaggtcc acgctgctgc cattaaatcc 500
 ctggggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
 aatgtttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600
 cccccctgt gcggtttact gtgggagaca gccaccttg aaggggaagg 650
 agatggggaa ggcccccttg agctgaaagt cccactggct ggcctcaggc 700
 tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750
 taaactctat ctgctgaaag ggctgcagg ccatcctggg agtaaagggc 800
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
 tgagccaagt gatatcctgt agtacacatt gtactgagtg gtttttctga 900
 ataaattcca tattttacct atga 924

<210> 84
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 84
 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu
 1 5 10 15
 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
 35 40 45

Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
50 55 60

Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
65 70 75

Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
80 85 90

Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
95 100 105

Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
110 115 120

Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
125 130 135

Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
140 145 150

Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala
155 160 165

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 85
<211> 2137
<212> DNA
<213> Homo Sapien

<400> 85
gctcccagcc aagaacctcg gggccgctgc gcggtgggga ggagttcccc 50
gaaaccgggc cgctaagcga ggctcctcc tccgcagat ccgaacggcc 100
tgggcgggggt caccctggct gggacaagaa gccgcgcct gcctgcccgg 150
gcccgggggag ggggctgggg ctggggccgg aggcgggggtg tgagtgggtg 200
tgtgccccggg gcggaggctt gatgcaatcc cgataagaaa tgctcgggtg 250
tcttgggcac ctaccctggt ggcccgtgag gcgctactat ataaggctgc 300
cggcccggag ccgcccgcgc gtcagagcag gagcgcctgcg tccaggatct 350
agggccacga ccatcccaac ccggcactca cagccccgca gcgcattccc 400
gtcgccgccc agcctcccgc acccccatcg ccggagctgc gccgagagcc 450
ccagggaggt gccatgcgga gcgggtgtgt ggtggtccac gtatggatcc 500
tgggccggcct ctggctggcc gtggccgggc gcccctcgc cttctcggac 550
gcggggcccc acgtgcacta cggctggggc gaccccatcc gcctgcggca 600
cctgtacacc tccggccccc acgggctctc cagctgcttc ctgcgcatcc 650

gtgccgacgg cgtcgtggac tgcgcgcggg gccagagcgc gcacagtttg 700
ctggagatca aggcagtcgc tctgcggacc gtggccatca agggcgtgca 750
cagcgtgcgg tacctctgca tgggcgccga cggcaagatg caggggctgc 800
ttcagtactc ggaggaagac tgtgctttcg aggaggagat ccgcccagat 850
ggctacaatg tgtaccgatc cgagaagcac cgctcccgg tctccctgag 900
cagtgcacaa cagcggcagc tgtacaagaa cagaggcttt cttccactct 950
ctcatttctt gcccatgctg cccatgggtcc cagaggagcc tgaggacctc 1000
agggggcact tggaatctga catgtttctt tcgcccctgg agaccgacag 1050
catggaccca tttgggcttg tcaccggact ggaggccgtg aggagtccca 1100
gctttgagaa gtaactgaga ccatgcccgg gcctcttcac tgctgccagg 1150
ggctgtggta cctgcagcgt gggggacgtg cttctacaag aacagtcctg 1200
agtccacgtt ctgttttagt ttaggaagaa acatctagaa gttgtacata 1250
ttcagagttt tccattggca gtgccagttt ctagccaata gacttgtctg 1300
atcataacat tgtaagcctg tagcttgccc agctgctgcc tgggccccca 1350
ttctgctccc tcgaggttgc tggacaagct gctgcactgt ctcagttctg 1400
cttgaatacc tccatcgatg gggaaactcac ttcccttgga aaaattctta 1450
tgtcaagctg aaattctcta attttttctc atcaactccc caggagcagc 1500
cagaagacag gcagtagttt taatttcagg aacagggtgat ccactctgta 1550
aaacagcagg taaatttcac tcaaccccat gtgggaattg atctatatct 1600
ctacttcag ggaccatttg cccttcccaa atccctccag gccagaactg 1650
actggagcag gcatggccca ccaggcttca ggagtagggg aagcctggag 1700
ccccactcca gccctgggac aacttgagaa ttccccctga ggccagttct 1750
gtcatggatg ctgtcctgag aataacttgc tgtcccgggtg tcacctgctt 1800
ccatctccca gccaccagc cctctgcca cctcacatgc ctccccatgg 1850
attggggcct ccaggcccc ccacctatg tcaacctgca cttcttggtc 1900
aaaaatcagg aaaagaaaag atttgaagac cccaagtctt gtcaataact 1950
tgctgtgtgg aagcagcggg ggaagaccta gaaccctttc ccagcactt 2000
ggttttccaa catgatattt atgagtaatt tattttgata tgtacatctc 2050
ttattttctt acattattta tgcccccaaa ttatatttat gtatgtaagt 2100

gaggtttgtt ttgtatatta aaatggagtt tgtttgt 2137

<210> 86

<211> 216

<212> PRT

<213> Homo Sapien

<400> 86

Met Arg Ser Gly Cys Val Val Val His Val Trp Ile Leu Ala Gly
1 5 10 15

Leu Trp Leu Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala
20 25 30

Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg
35 40 45

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
50 55 60

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
65 70 75

Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
80 85 90

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
95 100 105

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
110 115 120

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
125 130 135

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
140 145 150

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe
155 160 165

Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg
170 175 180

Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp
185 190 195

Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg
200 205 210

Ser Pro Ser Phe Glu Lys
215

<210> 87

<211> 26

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 87
atccgcccag atggctacaa tgtgta 26

<210> 88
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 88
gcctcccggt ctccctgagc agtgccaaac agcggcagtg ta 42

<210> 89
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
ccagtccggt gacaagccca aa 22

<210> 90
<211> 1857
<212> DNA
<213> Homo Sapien

<400> 90
gtctgttccc aggagtcctt cggcggtgtg tgtgtcagtg gcctgatcgc 50
gatggggaca aaggcgcaag tcgagaggaa actggtgtgc ctcttcatat 100
tggcgatcct gttgtgctcc ctggcattgg gcagtgttac agtgcactct 150
tctgaacctg aagtcagaat tcctgagaat aatcctgtga agttgtcctg 200
tgcctactcg ggcttttctt ctccccgtgt ggagtggaaag tttgaccaag 250
gagacaccac cagactcgtt tgctataata acaagatcac agcttcctat 300
gaggaccggg tgaccttctt gccaaactgg atcaccttca agtccgtgac 350
acgggaagac actgggacat acacttgat ggtctctgag gaaggcggca 400
acagctatgg ggaggtcaag gtcaagctca tcgtgcttgt gcctccatcc 450
aagcctacag ttaacatccc ctctctgcc accattggga accgggcagt 500
gctgacatgc tcagaacaag atggttcccc accttctgaa tacacctggt 550
tcaaagatgg gatagtgatg cctacgaatc caaaagcac ccgtgccttc 600

agcaactctt cctatgtcct gaatcccaca acaggagagc tggctcttga 650
 tcccctgtca gcctctgata ctggagaata cagctgtgag gcacggaatg 700
 ggtatgggac acccatgact tcaaatgctg tgcgcatgga agctgtggag 750
 cggaatgtgg gggatcatgt ggcagccgtc cttgtaacct tgattctcct 800
 gggaatcttg gtttttggca tctggtttgc ctatagccga ggccactttg 850
 acagaacaaa gaaagggact tcgagtaaga aggtgattta cagccagcct 900
 agtgcccgaa gtgaaggaga attcaaacag acctcgatcat tcttgggtgtg 950
 agcctgggtcg gctcaccgcc tatcatctgc atttgcctta ctcaggtgct 1000
 accggactct ggcccctgat gtctgtagt ttacaggatg ccttatttgt 1050
 cttctacacc ccacagggcc ccctacttct tcggatgtgt ttttaataat 1100
 gtcagctatg tgcccatcc tccttcatgc cctccctccc tttcctacca 1150
 ctgctgagtg gcctggaact tgtttaaagt gtttattccc catttctttg 1200
 agggatcagg aaggaatcct gggatgcca ttgacttccc ttctaagtag 1250
 acagcaaaaa tggcggggggt cgcaggaatc tgcactcaac tgccacctg 1300
 gctggcaggg atctttgaat aggtatcttg agcttggttc tgggctcttt 1350
 ccttgtgtac tgacgaccag ggccagctgt tctagagcgg gaattagagg 1400
 ctagagcggc tgaaatgggt gtttggtgat gacactgggg tccttccatc 1450
 tctggggccc actctcttct gtcttcccat gggaagtgcc actgggatcc 1500
 ctctgccctg tctcctgaa tacaagctga ctgacattga ctgtgtctgt 1550
 ggaaaatggg agctcttgtt gtggagagca tagtaaattt tcagagaact 1600
 tgaagccaaa aggatttaaa accgctgctc taaagaaaag aaaactggag 1650
 gctgggcgca gtggctcacg cctgtaatcc cagaggctga ggcaggcgga 1700
 tcacctgagg tcgggagttc gggatcagcc tgaccaacat ggagaaaccc 1750
 tactggaaat acaaagttag ccaggcatgg tggatgcatgc ctgtagtccc 1800
 agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaa 1850
 aaaaaa 1857

<210> 91
 <211> 299
 <212> PRT
 <213> Homo Sapien
 <400> 91

Met 1	Gly	Thr	Lys	Ala 5	Gln	Val	Glu	Arg	Lys 10	Leu	Leu	Cys	Leu	Phe 15
Ile	Leu	Ala	Ile	Leu 20	Leu	Cys	Ser	Leu	Ala 25	Leu	Gly	Ser	Val	Thr 30
Val	His	Ser	Ser	Glu 35	Pro	Glu	Val	Arg	Ile 40	Pro	Glu	Asn	Asn	Pro 45
Val	Lys	Leu	Ser	Cys 50	Ala	Tyr	Ser	Gly	Phe 55	Ser	Ser	Pro	Arg	Val 60
Glu	Trp	Lys	Phe	Asp 65	Gln	Gly	Asp	Thr	Thr 70	Arg	Leu	Val	Cys	Tyr 75
Asn	Asn	Lys	Ile	Thr 80	Ala	Ser	Tyr	Glu	Asp 85	Arg	Val	Thr	Phe	Leu 90
Pro	Thr	Gly	Ile	Thr 95	Phe	Lys	Ser	Val	Thr 100	Arg	Glu	Asp	Thr	Gly 105
Thr	Tyr	Thr	Cys	Met 110	Val	Ser	Glu	Glu	Gly 115	Gly	Asn	Ser	Tyr	Gly 120
Glu	Val	Lys	Val	Lys 125	Leu	Ile	Val	Leu	Val 130	Pro	Pro	Ser	Lys	Pro 135
Thr	Val	Asn	Ile	Pro 140	Ser	Ser	Ala	Thr	Ile 145	Gly	Asn	Arg	Ala	Val 150
Leu	Thr	Cys	Ser	Glu 155	Gln	Asp	Gly	Ser	Pro 160	Pro	Ser	Glu	Tyr	Thr 165
Trp	Phe	Lys	Asp	Gly 170	Ile	Val	Met	Pro	Thr 175	Asn	Pro	Lys	Ser	Thr 180
Arg	Ala	Phe	Ser	Asn 185	Ser	Ser	Tyr	Val	Leu 190	Asn	Pro	Thr	Thr	Gly 195
Glu	Leu	Val	Phe	Asp 200	Pro	Leu	Ser	Ala	Ser 205	Asp	Thr	Gly	Glu	Tyr 210
Ser	Cys	Glu	Ala	Arg 215	Asn	Gly	Tyr	Gly	Thr 220	Pro	Met	Thr	Ser	Asn 225
Ala	Val	Arg	Met	Glu 230	Ala	Val	Glu	Arg	Asn 235	Val	Gly	Val	Ile	Val 240
Ala	Ala	Val	Leu	Val 245	Thr	Leu	Ile	Leu	Leu 250	Gly	Ile	Leu	Val	Phe 255
Gly	Ile	Trp	Phe	Ala 260	Tyr	Ser	Arg	Gly	His 265	Phe	Asp	Arg	Thr	Lys 270
Lys	Gly	Thr	Ser	Ser 275	Lys	Lys	Val	Ile	Tyr 280	Ser	Gln	Pro	Ser	Ala 285
Arg	Ser	Glu	Gly	Glu	Phe	Lys	Gln	Thr	Ser	Ser	Phe	Leu	Val	

<210> 92
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 92
 tcgcgagct gtgttctgtt tccc 24

<210> 93
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 93
 tgatcgcat ggggacaaaag gcgcaagctc gagaggaaac tgttgtgcct 50

<210> 94
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 94
 acacctgggtt caaagatggg 20

<210> 95
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 95
 taggaagagt tgctgaaggc acgg 24

<210> 96
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 96
 ttgccttact caggtgctac 20

<210> 97

<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 97
actcagcagt ggtaggaaag 20

<210> 98
<211> 1200
<212> DNA
<213> Homo Sapien

<400> 98
cccacgcgtc cgaacctctc cagcgatggg agccgcccgc ctgctgccc 50
acctcactct gtgcttacag ctgctgattc tctgctgtca aactcagtac 100
gtgagggacc agggcgccat gaccgaccag ctgagcaggc ggcagatccg 150
cgagtaccaa ctctacagca ggaccagtgg caagcacgtg caggtcaccg 200
ggcgtcgcgt ctccgccacc gccgaggacg gcaacaagtt tgccaagctc 250
atagtggaga cggacacgtt tggcagccgg gttcgcgtca aaggggctga 300
gagtgagaag tacatctgta tgaacaagag gggcaagctc atcgggaagc 350
ccagcgggaa gagcaaagac tgcgtgttca cggagatcgt gctggagaac 400
aactatacgg ccttcagaa cgcgcggcac gagggctggg tcatggcctt 450
cacgcggcag gggcggtccc gccaggttcc ccgcagccgc cagaaccagc 500
gcgaggccca cttcatcaag cgcctctacc aaggccagct gcccttcccc 550
aaccacgccg agaagcagaa gcagttcgag tttgtgggct ccgccccac 600
ccgcccggacc aagcgcacac ggcggcccca gccctcacg tagtctggga 650
ggcagggggc agcagcccct gggccgcctc cccacccctt tcccttctta 700
atccaaggac tgggctgggg tggcgggagg ggagccagat ccccgaggga 750
ggaccctgag ggccgcgaag catccgagcc cccagctggg aaggggcagg 800
ccggtgcccc aggggcggct ggcacagtgc ccccttccc gacgggtggc 850
aggccctgga gaggaactga gtgtcaccct gatctcaggc caccagcctc 900
tgccggcctc ccagccgggc tcctgaagcc cgctgaaagg tcagcgactg 950
aaggccttgc agacaaccgt ctggaggtgg ctgtcctcaa aatctgcttc 1000
tcggatctcc ctcagtctgc cccagcccc caaactcctc ctggctagac 1050

tgtaggaagg gacttttgtt tgtttgtttg tttcaggaaa aaagaaagg 1100
agagagagga aaatagaggg ttgtccactc ctcacattcc acgacccagg 1150
cctgcacccc acccccaact cccagccccg gaataaaacc attttcctgc 1200

<210> 99
<211> 205
<212> PRT
<213> Homo Sapien

<400> 99
Met Gly Ala Ala Arg Leu Leu Pro Asn Leu Thr Leu Cys Leu Gln
1 5 10 15
Leu Leu Ile Leu Cys Cys Gln Thr Gln Tyr Val Arg Asp Gln Gly
20 25 30
Ala Met Thr Asp Gln Leu Ser Arg Arg Gln Ile Arg Glu Tyr Gln
35 40 45
Leu Tyr Ser Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg
50 55 60
Arg Ile Ser Ala Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu
65 70 75
Ile Val Glu Thr Asp Thr Phe Gly Ser Arg Val Arg Ile Lys Gly
80 85 90
Ala Glu Ser Glu Lys Tyr Ile Cys Met Asn Lys Arg Gly Lys Leu
95 100 105
Ile Gly Lys Pro Ser Gly Lys Ser Lys Asp Cys Val Phe Thr Glu
110 115 120
Ile Val Leu Glu Asn Asn Tyr Thr Ala Phe Gln Asn Ala Arg His
125 130 135
Glu Gly Trp Phe Met Ala Phe Thr Arg Gln Gly Arg Pro Arg Gln
140 145 150
Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu Ala His Phe Ile Lys
155 160 165
Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn His Ala Glu Lys
170 175 180
Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr Arg Arg Thr
185 190 195
Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
200 205

<210> 100
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 100
cagtacgtga gggaccaggg cgccatga 28

<210> 101
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 101
ccggtgacct gcacgtgctt gcca 24

<210> 102
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<220>
<221> unsure
<222> 21
<223> unknown base

<400> 102
gcggatctgc cgctgtctca nctggtcggt catggcgccc t 41

<210> 103
<211> 1679
<212> DNA
<213> Homo Sapien

<400> 103
gttgtgtcct tcagcaaaac agtggattta aatctccttg cacaagcttg 50
agagcaacac aatctatcag gaaagaaaga aagaaaaaaa ccgaacctga 100
caaaaaagaa gaaaaagaag aagaaaaaaa atcatgaaaa ccatccagcc 150
aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200
tgtgtctctt ccaaggagtg ccctgtgcga ggggagatgc caccttcccc 250
aaagctatgg acaacgtgac ggtccggcag ggggagagcg ccaccctcag 300
gtgcactatt gacaaccggg tcaccgggt ggctggcta aaccgcagca 350
ccatcctcta tgctgggaat gacaagtggg gcctggatcc tcgctgggtc 400
cttctgagca acacccaaac gcagtacagc atcgagatcc agaacgtgga 450
tgtgtatgac gagggccctt acacctgctc ggtgcagaca gacaaccacc 500

				20					25					30
Val	Arg	Ser	Gly	Asp 35	Ala	Thr	Phe	Pro	Lys 40	Ala	Met	Asp	Asn	Val 45
Thr	Val	Arg	Gln	Gly 50	Glu	Ser	Ala	Thr	Leu 55	Arg	Cys	Thr	Ile	Asp 60
Asn	Arg	Val	Thr	Arg 65	Val	Ala	Trp	Leu	Asn 70	Arg	Ser	Thr	Ile	Leu 75
Tyr	Ala	Gly	Asn	Asp 80	Lys	Trp	Cys	Leu	Asp 85	Pro	Arg	Val	Val	Leu 90
Leu	Ser	Asn	Thr	Gln 95	Thr	Gln	Tyr	Ser	Ile 100	Glu	Ile	Gln	Asn	Val 105
Asp	Val	Tyr	Asp	Glu 110	Gly	Pro	Tyr	Thr	Cys 115	Ser	Val	Gln	Thr	Asp 120
Asn	His	Pro	Lys	Thr 125	Ser	Arg	Val	His	Leu 130	Ile	Val	Gln	Val	Ser 135
Pro	Lys	Ile	Val	Glu 140	Ile	Ser	Ser	Asp	Ile 145	Ser	Ile	Asn	Glu	Gly 150
Asn	Asn	Ile	Ser	Leu 155	Thr	Cys	Ile	Ala	Thr 160	Gly	Arg	Pro	Glu	Pro 165
Thr	Val	Thr	Trp	Arg 170	His	Ile	Ser	Pro	Lys 175	Ala	Val	Gly	Phe	Val 180
Ser	Glu	Asp	Glu	Tyr 185	Leu	Glu	Ile	Gln	Gly 190	Ile	Thr	Arg	Glu	Gln 195
Ser	Gly	Asp	Tyr	Glu 200	Cys	Ser	Ala	Ser	Asn 205	Asp	Val	Ala	Ala	Pro 210
Val	Val	Arg	Arg	Val 215	Lys	Val	Thr	Val	Asn 220	Tyr	Pro	Pro	Tyr	Ile 225
Ser	Glu	Ala	Lys	Gly 230	Thr	Gly	Val	Pro	Val 235	Gly	Gln	Lys	Gly	Thr 240
Leu	Gln	Cys	Glu	Ala 245	Ser	Ala	Val	Pro	Ser 250	Ala	Glu	Phe	Gln	Trp 255
Tyr	Lys	Asp	Asp	Lys 260	Arg	Leu	Ile	Glu	Gly 265	Lys	Lys	Gly	Val	Lys 270
Val	Glu	Asn	Arg	Pro 275	Phe	Leu	Ser	Lys	Leu 280	Ile	Phe	Phe	Asn	Val 285
Ser	Glu	His	Asp	Tyr 290	Gly	Asn	Tyr	Thr	Cys 295	Val	Ala	Ser	Asn	Lys 300
Leu	Gly	His	Thr	Asn 305	Ala	Ser	Ile	Met	Leu 310	Phe	Gly	Pro	Gly	Ala 315

Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val
 320 325 330

Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe
 335 340

<210> 105
 <211> 1734
 <212> DNA
 <213> Homo Sapien

<400> 105
 gtggactctg agaagcccag gcagttgagg acaggagaga gaaggctgca 50
 gaccagagg gagggaggac agggagtcgg aaggaggagg acagaggagg 100
 gcacagagac gcagagcaag ggcggcaagg aggagaccct ggtgggagga 150
 agacactctg gagagagagg gggctgggca gagatgaagt tccagggggcc 200
 cctggcctgc ctctgctgg ccctctgcct gggcagtgagg gaggctggcc 250
 ccctgcagag cggagaggaa agcactggga caaatattgg ggaggccctt 300
 ggacatggcc tgggagacgc cctgagcgaa ggggtgggaa aggccattgg 350
 caaagaggcc ggaggggcag ctggctctaa agtcagtgag gcccttggcc 400
 aagggaccag agaagcagtt ggcactggag tcaggcaggt tccaggcttt 450
 ggcgagcag atgctttggg caacagggtc ggggaagcag cccatgctct 500
 gggaaacact gggcagcaga ttggcagaca ggcagaagat gtcattcgac 550
 acggagcaga tgctgtccgc ggctcctggc aggggggtgcc tggccacagt 600
 ggtgcttggg aaacttctgg aggccatggc atctttggct ctcaagggtg 650
 ccttgagggc cagggccagg gcaatcctgg aggtctgggg actccgtggg 700
 tccacggata ccccgaaac tcagcaggca gctttggaat gaatcctcag 750
 ggagctccct ggggtcaagg aggcaatgga gggccaccaa actttgggac 800
 caaactcag ggagctgtgg ccagcctgg ctatggttca gtgagagcca 850
 gcaaccagaa tgaagggtgc acgaatcccc caccatctgg ctgaggtgga 900
 ggctccagca actctggggg aggcagcggc tcacagtcgg gcagcagtg 950
 cagtggcagc aatgggtgaca acaacaatgg cagcagcagt ggtggcagca 1000
 gcagtggcag cagcagtggc agcagcagtg gcggcagcag tggcggcagc 1050
 agtgggtggc gcagtggcaa cagtgggtggc agcagaggtg acagcggcag 1100
 tgagtctcc tggggatcca gcaccggctc ctctccggc aaccacggtg 1150

				140					145					150
Phe	Gly	Ser	Gln	Gly 155	Gly	Leu	Gly	Gly	Gln 160	Gly	Gln	Gly	Asn	Pro 165
Gly	Gly	Leu	Gly	Thr 170	Pro	Trp	Val	His	Gly 175	Tyr	Pro	Gly	Asn	Ser 180
Ala	Gly	Ser	Phe	Gly 185	Met	Asn	Pro	Gln	Gly 190	Ala	Pro	Trp	Gly	Gln 195
Gly	Gly	Asn	Gly	Gly 200	Pro	Pro	Asn	Phe	Gly 205	Thr	Asn	Thr	Gln	Gly 210
Ala	Val	Ala	Gln	Pro 215	Gly	Tyr	Gly	Ser	Val 220	Arg	Ala	Ser	Asn	Gln 225
Asn	Glu	Gly	Cys	Thr 230	Asn	Pro	Pro	Pro	Ser 235	Gly	Ser	Gly	Gly	Gly 240
Ser	Ser	Asn	Ser	Gly 245	Gly	Gly	Ser	Gly	Ser 250	Gln	Ser	Gly	Ser	Ser 255
Gly	Ser	Gly	Ser	Asn 260	Gly	Asp	Asn	Asn	Asn 265	Gly	Ser	Ser	Ser	Gly 270
Gly	Ser	Ser	Ser	Gly 275	Ser	Ser	Ser	Gly	Ser 280	Ser	Ser	Gly	Gly	Ser 285
Ser	Gly	Gly	Ser	Ser 290	Gly	Gly	Ser	Ser	Gly 295	Asn	Ser	Gly	Gly	Ser 300
Arg	Gly	Asp	Ser	Gly 305	Ser	Glu	Ser	Ser	Trp 310	Gly	Ser	Ser	Thr	Gly 315
Ser	Ser	Ser	Gly	Asn 320	His	Gly	Gly	Ser	Gly 325	Gly	Gly	Asn	Gly	His 330
Lys	Pro	Gly	Cys	Glu 335	Lys	Pro	Gly	Asn	Glu 340	Ala	Arg	Gly	Ser	Gly 345
Glu	Ser	Gly	Ile	Gln 350	Gly	Phe	Arg	Gly	Gln 355	Gly	Val	Ser	Ser	Asn 360
Met	Arg	Glu	Ile	Ser 365	Lys	Glu	Gly	Asn	Arg 370	Leu	Leu	Gly	Gly	Ser 375
Gly	Asp	Asn	Tyr	Arg 380	Gly	Gln	Gly	Ser	Ser 385	Trp	Gly	Ser	Gly	Gly 390
Gly	Asp	Ala	Val	Gly 395	Gly	Val	Asn	Thr	Val 400	Asn	Ser	Glu	Thr	Ser 405
Pro	Gly	Met	Phe	Asn 410	Phe	Asp	Thr	Phe	Trp 415	Lys	Asn	Phe	Lys	Ser 420
Lys	Leu	Gly	Phe	Ile 425	Asn	Trp	Asp	Ala	Ile 430	Asn	Lys	Asp	Gln	Arg 435

Ser Ser Arg Ile Pro
440

<210> 107
<211> 918
<212> DNA
<213> Homo Sapien

<400> 107
agccaggcag cacatcacag cgggaggagc tgtcccaggt ggcccagctc 50
agcaatggca atgggggtcc ccagagtcac tctgctctgc ctctttgggg 100
ctgcgctctg cctgacaggg tcccaagccc tgcagtgcta cagctttgag 150
cacacctact ttggcccctt tgacctcagg gccatgaagc tgcccagcat 200
ctcctgtcct catgagtgtt ttgaggctat cctgtctctg gacaccgggt 250
atcgcgcgcc ggtgaccctg gtgcggaagg gctgctggac cgggcctcct 300
gcggggccaga cgcaatcgaa cccggacgcg ctgccgccag actactcggg 350
ggtgcgcggc tgcacaactg acaaatgcaa cgcccacctc atgactcatg 400
acgccctccc caacctgagc caagcacccg acccgccgac gctcagcggc 450
gccgagtgtt acgcctgtat cgggggtccac caggatgact gcgctatcgg 500
caggccccga cgagtccagt gtcaccagga ccagaccgcc tgcttccagg 550
gcagtggcag aatgacagtt ggcaatttct cagtccctgt gtacatcaga 600
acctgccacc ggccctcctg caccaccgag ggcaccacca gccctgggac 650
agccatcgac ctccagggtt cctgctgtga ggggtacctc tgcaacagga 700
aatccatgac ccagcccttc accagtgtt cagccaccac ccctccccga 750
gcactacagg tcctggccct gtcctccca gtctcctgc tgggtggggct 800
ctcagcatag accgcccctc caggatgctg gggacagggc tcacacacct 850
cattcttgtt gtttcagccc ctatcacata gctcactgga aaatgatgtt 900
aaagtaagaa ttgcaaaa 918

<210> 108
<211> 251
<212> PRT
<213> Homo Sapien

<400> 108
Met Ala Met Gly Val Pro Arg Val Ile Leu Leu Cys Leu Phe Gly
1 5 10 15
Ala Ala Leu Cys Leu Thr Gly Ser Gln Ala Leu Gln Cys Tyr Ser
20 25 30

ttggctccca ctccagctcc ctgtattgat ataacctgtc aggctggctt 1700
 ggttaggttt tactggggca gaggataggg aatctcttat taaaactaac 1750
 atgaaatatg tgttggttttc atttgcaa ataaataaag atacataatg 1800
 tttgtatgaa aaa 1813

<210> 110
 <211> 390
 <212> PRT
 <213> Homo Sapien

<400> 110
 Met Ile Ser Leu Pro Gly Pro Leu Val Thr Asn Leu Leu Arg Phe
 1 5 10 15
 Leu Phe Leu Gly Leu Ser Ala Leu Ala Pro Pro Ser Arg Ala Gln
 20 25 30
 Leu Gln Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly
 35 40 45
 Gly Glu Val Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val
 50 55 60
 Ser Ser Ser Gln Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe
 65 70 75
 Lys Gln Lys Glu Lys Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly
 80 85 90
 Val Thr Thr Ser Lys Pro Gly Val Ser Leu Val Tyr Ser Met Pro
 95 100 105
 Ser Arg Asn Leu Ser Leu Arg Leu Glu Gly Leu Gln Glu Lys Asp
 110 115 120
 Ser Gly Pro Tyr Ser Cys Ser Val Asn Val Gln Asp Lys Gln Gly
 125 130 135
 Lys Ser Arg Gly His Ser Ile Lys Thr Leu Glu Leu Asn Val Leu
 140 145 150
 Val Pro Pro Ala Pro Pro Ser Cys Arg Leu Gln Gly Val Pro His
 155 160 165
 Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser Pro Arg Ser Lys
 170 175 180
 Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro Ser Phe Gln
 185 190 195
 Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser Leu Ser
 200 205 210
 Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys Lys
 215 220 225

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 113

ggccacagca tcaaacctt agaactcaat gtactgggtc ctccagctcc 50

<210> 114

<211> 2479

<212> DNA

<213> Homo Sapien

<400> 114

acttgccatc acctgttgcc agtgtggaaa aattctccct gttgaatttt 50

ttgcacatgg aggacagcag caaagagggc aacacaggct gataagacca 100

gagacagcag ggagattatt ttaccatacg ccctcaggac gttccctcta 150

gctggagttc tggacttcaa cagaaccca tccagtcatt ttgattttgc 200

tgtttatttt ttttttcttt ttctttttcc caccacattg tattttattt 250

cgtacttca gaaatgggccc tacagaccac aaagtggccc agccatgggg 300

cttttttctt gaagtcttgg cttatcattt ccctggggct ctactcacag 350

gtgtccaaac tcctggcctg ccctagtgtg tgccgctgcg acaggaactt 400

tgtctactgt aatgagcgaa gcttgacctc agtgccctctt gggatcccgg 450

agggcgtaac cgtactctac ctccacaaca accaaattaa taatgctgga 500

tttctgcag aactgcacaa tgtacagtcg gtgcacacgg tctacctgta 550

tggcaaccaa ctggacgaat tccccatgaa ccttcccaag aatgtcagag 600

ttctccattt gcaggaaaac aatattcaga ccatttcacg ggctgctctt 650

gccagctct tgaagcttga agagctgcac ctggatgaca actccatata 700

cacagtgggg gtggaagacg gggccttcog ggaggctatt agcctcaaata 750

tgttggtttt gtctaagaat cacctgagca gtgtgcctgt tgggcttcct 800

gtggacttgc aagagctgag agtggatgaa aatcgaattg ctgtcatata 850

cgacatggcc ttccagaatc tcacgagctt ggagcgtctt attgtggacg 900

ggaacctcct gaccaacaag ggtatcgccg agggcacctt cagccatctc 950

accaagctca aggaattttc aattgtacgt aattcgctgt cccacctctc 1000

tcccgatctc ccaggtagcg atctgatcag gctctatttg caggacaacc 1050

agataaacca cattcctttg acagccttct caaatctgcg taagctggaa 1100

cggctggata tatccaacaa ccaactgcgg atgctgactc aagggggtttt 1150
 tgataatctc tccaacctga agcagctcac tgctcggaat aacccttggt 1200
 tttgtgactg cagtattaaa tgggtcacag aatgggtcaa atatatccct 1250
 tcatctctca acgtgcgggg tttcatgtgc caaggtcctg aacaagtccg 1300
 ggggatggcc gtcagggaaat taaatatgaa tcttttgtcc tgtcccacca 1350
 cgacccccgg cctgcctctc ttcaccccag cccaagtac agcttctccg 1400
 accactcagc ctcccaccct ctctattcca aaccctagca gaagctacac 1450
 gctccaact cctaccacat cgaaacttcc cagattcct gactgggatg 1500
 gcagagaaag agtgacccca cctatttctg aacggatcca gctctctatc 1550
 cattttgtga atgatacttc cattcaagtc agctggctct ctctcttcac 1600
 cgtgatggca tacaaactca catgggtgaa aatggggccac agtttagtag 1650
 ggggcacgtc tcaggagcgc atagtcagcg gtgagaagca acacctgagc 1700
 ctggttaact tagagccccg atccacctat cggatttggt tagtgccact 1750
 ggatgctttt aactaccgcg cggtagaaga caccatttgt tcagaggcca 1800
 ccacccatgc ctctatctg aacaacggca gcaacacagc gtccagccat 1850
 gagcagacga cgtcccacag catgggctcc ccttttctgc tggcgggctt 1900
 gatcgggggc gcggtgatat ttgtgctggt ggtcttgctc agcgtctttt 1950
 gctggcatat gcacaaaaag gggcgtaca cctcccagaa gtggaaatac 2000
 aaccggggcc ggcggaaaga tgattattgc gaggcaggca ccaagaagga 2050
 caactccatc ctggagatga cagaaaccag ttttcagatc gtctccttaa 2100
 ataacgatca actccttaaa ggagatttca gactgcagcc catttacacc 2150
 ccaaattggg gcattaatta cacagactgc catatcccca acaacatgcg 2200
 atactgcaac agcagcgtgc cagacctgga gcaactgcat acgtgacagc 2250
 cagaggccca gcgttatcaa ggcggacaat tagactcttg agaacacact 2300
 cgtgtgtgca cataaagaca cgcagattac atttgataaa tgttacacag 2350
 atgcatttgt gcatttgaat actctgtaat ttatacgggtg tactatataa 2400
 tgggatttaa aaaaagtgc atcttttcta tttcaagtta attacaaaca 2450
 gttttgtaac tctttgcttt ttaaattctt 2479

<210> 115

<211> 660

<212> PRT
 <213> Homo Sapien

<400> 115

Met	Gly	Leu	Gln	Thr	Thr	Lys	Trp	Pro	Ser	His	Gly	Ala	Phe	Phe	1	5	10	15
Leu	Lys	Ser	Trp	Leu	Ile	Ile	Ser	Leu	Gly	Leu	Tyr	Ser	Gln	Val	20	25	30	
Ser	Lys	Leu	Leu	Ala	Cys	Pro	Ser	Val	Cys	Arg	Cys	Asp	Arg	Asn	35	40	45	
Phe	Val	Tyr	Cys	Asn	Glu	Arg	Ser	Leu	Thr	Ser	Val	Pro	Leu	Gly	50	55	60	
Ile	Pro	Glu	Gly	Val	Thr	Val	Leu	Tyr	Leu	His	Asn	Asn	Gln	Ile	65	70	75	
Asn	Asn	Ala	Gly	Phe	Pro	Ala	Glu	Leu	His	Asn	Val	Gln	Ser	Val	80	85	90	
His	Thr	Val	Tyr	Leu	Tyr	Gly	Asn	Gln	Leu	Asp	Glu	Phe	Pro	Met	95	100	105	
Asn	Leu	Pro	Lys	Asn	Val	Arg	Val	Leu	His	Leu	Gln	Glu	Asn	Asn	110	115	120	
Ile	Gln	Thr	Ile	Ser	Arg	Ala	Ala	Leu	Ala	Gln	Leu	Leu	Lys	Leu	125	130	135	
Glu	Glu	Leu	His	Leu	Asp	Asp	Asn	Ser	Ile	Ser	Thr	Val	Gly	Val	140	145	150	
Glu	Asp	Gly	Ala	Phe	Arg	Glu	Ala	Ile	Ser	Leu	Lys	Leu	Leu	Phe	155	160	165	
Leu	Ser	Lys	Asn	His	Leu	Ser	Ser	Val	Pro	Val	Gly	Leu	Pro	Val	170	175	180	
Asp	Leu	Gln	Glu	Leu	Arg	Val	Asp	Glu	Asn	Arg	Ile	Ala	Val	Ile	185	190	195	
Ser	Asp	Met	Ala	Phe	Gln	Asn	Leu	Thr	Ser	Leu	Glu	Arg	Leu	Ile	200	205	210	
Val	Asp	Gly	Asn	Leu	Leu	Thr	Asn	Lys	Gly	Ile	Ala	Glu	Gly	Thr	215	220	225	
Phe	Ser	His	Leu	Thr	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Val	Arg	Asn	230	235	240	
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile	245	250	255	
Arg	Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr	260	265	270	

ttccatatta tgtatttgaa gtttttgaag aaaccccaca gggatcattt 1200
gtaggcgtgg tgtctgccac agaccagac aataggaaat ctctatcag 1250
gtattctatt actaggagca aagtgttcaa tatcaatgat aatggtacaa 1300
tactacaag taactcactg gatcgtgaaa tcagtgttg gtacaaccta 1350
agtattacag ccacagaaaa atacaatata gaacagatct ctctgatccc 1400
actgtatgtg caagttctta acatcaatga tcatgtctct gagttctctc 1450
aatactatga gacttatgtt tgtgaaaatg caggctctgg tcaggtaatt 1500
cagactatca gtgcagtgg tagagatgaa tccatagaag agcaccattt 1550
ttactttaat ctatctgtag aagacactaa caattcaagt tttacaatca 1600
tagataatca agataacaca gctgtcattt tgactaatag aactggtttt 1650
aaccttcaag aagaacctgt cttctacatc tccatcttaa ttgccgacaa 1700
tggaatcccg tcacttacia gtacaaacac ccttaccatc catgtctgtg 1750
actgtggtga cagtgggagc acacagacct gccagtacca ggagcttgtg 1800
ctttccatgg gattcaagac agaagttatc attgctattc tcatttgcac 1850
tatgatcata tttgggttta tttttttgac tttgggttta aaacaacgga 1900
gaaaacagat tctatttctc gagaaaagtg aagatttcag agagaatata 1950
ttccaatatg atgatgaagg ggggtggagaa gaagatacag aggcctttga 2000
tatagcagag ctgaggagta gtaccataat gcgggaacgc aagactcgga 2050
aaaccacaag cgctgagatc aggagcctat acaggcagtc tttgcaagtt 2100
ggccccgaca gtgccatatt caggaaatc attctggaaa agctcgaaga 2150
agctaatact gatccgtgtg cccctccctt tgattccctc cagacctacg 2200
cttttgaggg aacagggcca ttagctggat ccttgagctc cttagaatca 2250
gcagtctctg atcaggatga aagctatgat taccttaatg agttgggacc 2300
tcgctttaaa agattagcat gcatgtttgg ttctgcagtg cagtcaaata 2350
attagggctt tttaccatca aaatttttaa aagtgtctaat gtgtattcga 2400
accaatggg agtcttaaag agttttgtgc cctggctcta tggcggggaa 2450
agccctagtc tatggagttt tctgatttcc ctggagtaaa tactccatgg 2500
ttatttttaag ctacctacat gctgtcattg aacagagatg tggggagaaa 2550
tgtaaacaat cagctcacag gcatcaatac aaccagattt gaagtaaaat 2600

aatgtaggaa gatattaaaa gtagatgaga ggacacaaga tgtagtcgat 2650
 ccttatgcga ttatatcatt atttacttag gaaagagtaa aaataccaaa 2700
 cgagaaaatt taaaggagca aaaatttgca agtcaaataag aaatgtacaa 2750
 atcgagataa catttacatt tctatcatat tgacatgaaa attgaaaatg 2800
 tatagtcaga gaaattttca tgaattattc catgaagtat tgtttccttt 2850
 atttaaa 2857

<210> 121
 <211> 772
 <212> PRT
 <213> Homo Sapien

<400> 121
 Met Asn Cys Tyr Leu Leu Leu Arg Phe Met Leu Gly Ile Pro Leu
 1 5 10 15
 Leu Trp Pro Cys Leu Gly Ala Thr Glu Asn Ser Gln Thr Lys Lys
 20 25 30
 Val Lys Gln Pro Val Arg Ser His Leu Arg Val Lys Arg Gly Trp
 35 40 45
 Val Trp Asn Gln Phe Phe Val Pro Glu Glu Met Asn Thr Thr Ser
 50 55 60
 His His Ile Gly Gln Leu Arg Ser Asp Leu Asp Asn Gly Asn Asn
 65 70 75
 Ser Phe Gln Tyr Lys Leu Leu Gly Ala Gly Ala Gly Ser Thr Phe
 80 85 90
 Ile Ile Asp Glu Arg Thr Gly Asp Ile Tyr Ala Ile Gln Lys Leu
 95 100 105
 Asp Arg Glu Glu Arg Ser Leu Tyr Ile Leu Arg Ala Gln Val Ile
 110 115 120
 Asp Ile Ala Thr Gly Arg Ala Val Glu Pro Glu Ser Glu Phe Val
 125 130 135
 Ile Lys Val Ser Asp Ile Asn Asp Asn Glu Pro Lys Phe Leu Asp
 140 145 150
 Glu Pro Tyr Glu Ala Ile Val Pro Glu Met Ser Pro Glu Gly Thr
 155 160 165
 Leu Val Ile Gln Val Thr Ala Ser Asp Ala Asp Asp Pro Ser Ser
 170 175 180
 Gly Asn Asn Ala Arg Leu Leu Tyr Ser Leu Leu Gln Gly Gln Pro
 185 190 195
 Tyr Phe Ser Val Glu Pro Thr Thr Gly Val Ile Arg Ile Ser Ser

				200					205					210
Lys	Met	Asp	Arg	Glu 215	Leu	Gln	Asp	Glu	Tyr 220	Trp	Val	Ile	Ile	Gln 225
Ala	Lys	Asp	Met	Ile 230	Gly	Gln	Pro	Gly	Ala 235	Leu	Ser	Gly	Thr	Thr 240
Ser	Val	Leu	Ile	Lys 245	Leu	Ser	Asp	Val	Asn 250	Asp	Asn	Lys	Pro	Ile 255
Phe	Lys	Glu	Ser	Leu 260	Tyr	Arg	Leu	Thr	Val 265	Ser	Glu	Ser	Ala	Pro 270
Thr	Gly	Thr	Ser	Ile 275	Gly	Thr	Ile	Met	Ala 280	Tyr	Asp	Asn	Asp	Ile 285
Gly	Glu	Asn	Ala	Glu 290	Met	Asp	Tyr	Ser	Ile 295	Glu	Glu	Asp	Asp	Ser 300
Gln	Thr	Phe	Asp	Ile 305	Ile	Thr	Asn	His	Glu 310	Thr	Gln	Glu	Gly	Ile 315
Val	Ile	Leu	Lys	Lys 320	Lys	Val	Asp	Phe	Glu 325	His	Gln	Asn	His	Tyr 330
Gly	Ile	Arg	Ala	Lys 335	Val	Lys	Asn	His	His 340	Val	Pro	Glu	Gln	Leu 345
Met	Lys	Tyr	His	Thr 350	Glu	Ala	Ser	Thr	Thr 355	Phe	Ile	Lys	Ile	Gln 360
Val	Glu	Asp	Val	Asp 365	Glu	Pro	Pro	Leu	Phe 370	Leu	Leu	Pro	Tyr	Tyr 375
Val	Phe	Glu	Val	Phe 380	Glu	Glu	Thr	Pro	Gln 385	Gly	Ser	Phe	Val	Gly 390
Val	Val	Ser	Ala	Thr 395	Asp	Pro	Asp	Asn	Arg 400	Lys	Ser	Pro	Ile	Arg 405
Tyr	Ser	Ile	Thr	Arg 410	Ser	Lys	Val	Phe	Asn 415	Ile	Asn	Asp	Asn	Gly 420
Thr	Ile	Thr	Thr	Ser 425	Asn	Ser	Leu	Asp	Arg 430	Glu	Ile	Ser	Ala	Trp 435
Tyr	Asn	Leu	Ser	Ile 440	Thr	Ala	Thr	Glu	Lys 445	Tyr	Asn	Ile	Glu	Gln 450
Ile	Ser	Ser	Ile	Pro 455	Leu	Tyr	Val	Gln	Val 460	Leu	Asn	Ile	Asn	Asp 465
His	Ala	Pro	Glu	Phe 470	Ser	Gln	Tyr	Tyr	Glu 475	Thr	Tyr	Val	Cys	Glu 480
Asn	Ala	Gly	Ser	Gly 485	Gln	Val	Ile	Gln	Thr 490	Ile	Ser	Ala	Val	Asp 495

Arg	Asp	Glu	Ser	Ile 500	Glu	Glu	His	His	Phe 505	Tyr	Phe	Asn	Leu	Ser 510
Val	Glu	Asp	Thr	Asn 515	Asn	Ser	Ser	Phe	Thr 520	Ile	Ile	Asp	Asn	Gln 525
Asp	Asn	Thr	Ala	Val 530	Ile	Leu	Thr	Asn	Arg 535	Thr	Gly	Phe	Asn	Leu 540
Gln	Glu	Glu	Pro	Val 545	Phe	Tyr	Ile	Ser	Ile 550	Leu	Ile	Ala	Asp	Asn 555
Gly	Ile	Pro	Ser	Leu 560	Thr	Ser	Thr	Asn	Thr 565	Leu	Thr	Ile	His	Val 570
Cys	Asp	Cys	Gly	Asp 575	Ser	Gly	Ser	Thr	Gln 580	Thr	Cys	Gln	Tyr	Gln 585
Glu	Leu	Val	Leu	Ser 590	Met	Gly	Phe	Lys	Thr 595	Glu	Val	Ile	Ile	Ala 600
Ile	Leu	Ile	Cys	Ile 605	Met	Ile	Ile	Phe	Gly 610	Phe	Ile	Phe	Leu	Thr 615
Leu	Gly	Leu	Lys	Gln 620	Arg	Arg	Lys	Gln	Ile 625	Leu	Phe	Pro	Glu	Lys 630
Ser	Glu	Asp	Phe	Arg 635	Glu	Asn	Ile	Phe	Gln 640	Tyr	Asp	Asp	Glu	Gly 645
Gly	Gly	Glu	Glu	Asp 650	Thr	Glu	Ala	Phe	Asp 655	Ile	Ala	Glu	Leu	Arg 660
Ser	Ser	Thr	Ile	Met 665	Arg	Glu	Arg	Lys	Thr 670	Arg	Lys	Thr	Thr	Ser 675
Ala	Glu	Ile	Arg	Ser 680	Leu	Tyr	Arg	Gln	Ser 685	Leu	Gln	Val	Gly	Pro 690
Asp	Ser	Ala	Ile	Phe 695	Arg	Lys	Phe	Ile	Leu 700	Glu	Lys	Leu	Glu	Glu 705
Ala	Asn	Thr	Asp	Pro 710	Cys	Ala	Pro	Pro	Phe 715	Asp	Ser	Leu	Gln	Thr 720
Tyr	Ala	Phe	Glu	Gly 725	Thr	Gly	Ser	Leu	Ala 730	Gly	Ser	Leu	Ser	Ser 735
Leu	Glu	Ser	Ala	Val 740	Ser	Asp	Gln	Asp	Glu 745	Ser	Tyr	Asp	Tyr	Leu 750
Asn	Glu	Leu	Gly	Pro 755	Arg	Phe	Lys	Arg	Leu 760	Ala	Cys	Met	Phe	Gly 765
Ser	Ala	Val	Gln	Ser 770	Asn	Asn								

97

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 122
cttgactgtc tctgaatctg caccc 25

<210> 123
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 123
aagtgggtgga agcctccagt gtgg 24

<210> 124
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 124
ccactacggt attagagcaa aagttaaaaa ccatcatggt tcctggagca 50
gc 52

<210> 125
<211> 1152
<212> DNA
<213> Homo Sapien

<400> 125
cttcagaaca gggtctcctt cccagtcac cagttgctcg agttagaatt 50
gtctgcaatg gccgccctgc agaaatctgt gagctctttc cttatgggga 100
ccctggccac cagctgcctc cttctcttgg ccctcttggt acagggagga 150
gcagctgcgc ccatcagctc ccactgcagg cttgacaagt ccaacttcca 200
gcagccctat atcaccaacc gcaccttcat gctggctaag gaggctagct 250
tggtctgataa caacacagac gtctgtctca ttggggagaa actgttccac 300
ggagtcagta tgagtgcgc ctgctatctg atgaagcagg tgctgaactt 350
cacccttgaa gaagtgtgt tccctcaatc tgataggttc cagccttata 400
tgcaggaggt ggtgcccttc ctggccaggc tcagcaacag gctaagcaca 450

	110		115		120									
Phe	Leu	Ala	Arg	Leu	Ser	Asn	Arg	Leu	Ser	Thr	Cys	His	Ile	Glu
	125				130									135
Gly	Asp	Asp	Leu	His	Ile	Gln	Arg	Asn	Val	Gln	Lys	Leu	Lys	Asp
	140								145					150
Thr	Val	Lys	Lys	Leu	Gly	Glu	Ser	Gly	Glu	Ile	Lys	Ala	Ile	Gly
	155								160					165
Glu	Leu	Asp	Leu	Leu	Phe	Met	Ser	Leu	Arg	Asn	Ala	Cys	Ile	
	170								175					

<210> 127
 <211> 2557
 <212> DNA
 <213> Homo Sapien

<400> 127
 gccctaacct tcccagggct cagctctttg gagctgcca ttctccggc 50
 tgcgagaaag gacgcgcgcc ctgcgtcggg cgaagaaaag aagcaaaact 100
 tgtcgggagg gtttcgtcat caacctcctt cccgcaaacc taaacctcct 150
 gccggggcca tccctagaca gaggaaagtt cctgcagagc cgaccagccc 200
 tagtggatct ggggcaggca gcggcgctgg ctgtggaatt agatctgttt 250
 tgaaccacgt ggagcgcac cgtggggctc ggaagtcacc gtccgcgggc 300
 accgggttgg cgctgcccga gtggaaccga cagtttgca gcctcggctg 350
 caagtggcct ctctccccg cggttggtgt tcagtgtcgg gtgagggctg 400
 cgagtgtggc aagttgcaaa gagagcctca gaggtccgaa gagcgtgcg 450
 ctctactcgc cgttcgttc ttctcttct cggttcccta ctgtgaaatc 500
 gcagcgacat ttacaaaggc ctccgggtcc taccgagacc gatccgcagc 550
 gtttgccccg gtctgacctt ttgcatcggg agccccgag caccggcgaa 600
 atggcgaggt tcccgaaggc cgacctggcc gctgcaggag ttatgttact 650
 ttgccacttc ttcacggacc agtttcagtt cgccgatggg aaaccggag 700
 accaaatcct tgattggcag tatggagtta ctacggcctt ccctcacaca 750
 gaggaggagg tggaagttga ttcacacgcg tacagccaca ggtggaaaag 800
 aaacttggac tttctcaagg cggtagacac gaaccgagca agcgtcggcc 850
 aagactctcc tgagcccaga agcttcacag acctgctgct ggatgatggg 900
 caggacaata aactcagat cgaggaggat acagaccaca attactatat 950

atctcgaata tatggtccat ctgattctgc cagccgggat ttatgggtga 1000
 acatagacca aatggaaaaa gataaagtga agattcatgg aatattgtcc 1050
 aatactcatc ggcaagctgc aagagtgaat ctgtccttcg attttccatt 1100
 ttatggccac ttcctacgtg aaatcactgt ggcaaccggg ggtttcatat 1150
 aactggaga agtcgtacat cgaatgctaa cagccacaca gtacatagca 1200
 cctttaatgg caaatttcga tcccagtgtg tccagaaatt caactgtcag 1250
 atattttgat aatggcacag cacttgtggt ccagtgggac catgtacatc 1300
 tccaggataa ttataacctg ggaagcttca cattccaggc aacctgctc 1350
 atggatggac gaatcatctt tggatacaaa gaaattcctg tcttggtcac 1400
 acagataagt tcaaccaatc atccagtga agtcggactg tccgatgcat 1450
 ttgtcgttgt ccacaggatc caacaaattc ccaatgttcg aagaagaaca 1500
 atttatgaat accaccgagt agagctacaa atgtcaaaaa ttaccaacat 1550
 ttcggctgtg gagatgaccc cattaccac atgcctccag ttaacagat 1600
 gtggccccctg tgtatcttct cagattggct tcaactgcag ttggtgtagt 1650
 aaacttcaaa gatgttccag tggatttgat cgtcatcggc aggactgggt 1700
 ggacagtgga tgccctgaag agtcaaaaga gaagatgtgt gagaatacag 1750
 aaccagtgga aacttcttct cgaaccacca caaccgtagg agcgacaacc 1800
 acccagttca gggtcctaac taccaccaga agagcagtga cttctcagtt 1850
 tcccaccagc ctccctacag aagatgatac caagatagca ctacatctaa 1900
 aagataatgg agcttctaca gatgacagtg cagctgagaa gaaaggggga 1950
 accctccacg ctggcctcat cattggaatc ctcatcctgg tcctcattgt 2000
 agccacagcc attcttgtga cagtctatat gtatcaccac ccaacatcag 2050
 cagccagcat cttctttatt gagagacgcc caagcagatg gcctgcgatg 2100
 aagtttagaa gaggtcttgg acatcctgcc tatgctgaag ttgaaccagt 2150
 tggagagaaa gaaggcttta ttgtatcaga gcagtgctaa aatttctagg 2200
 acagaacaac accagtactg gtttacaggt gttaagacta aaattttgcc 2250
 tataccttta agacaaacaa acaaacacac acacaaacaa gctctaagct 2300
 gctgtagcct gaagaagaca agatttcttg acaagctcag ccagggaaac 2350
 aaagggtaaa caaaaaacta aaacttatac aagataccat ttacactgaa 2400

catagaattc cctagtggaa tgtcatctat agttcactcg gaacatctcc 2450
 cgtggactta tctgaagtat gacaagatta taatgctttt ggcttaggtg 2500
 caggggttgca aagggatcag aaaaaaaaaa tcataataaa gcttttagttc 2550
 atgaggg 2557

<210> 128
 <211> 529
 <212> PRT
 <213> Homo Sapien

<400> 128
 Met Ala Arg Phe Pro Lys Ala Asp Leu Ala Ala Ala Gly Val Met
 1 5 10 15
 Leu Leu Cys His Phe Phe Thr Asp Gln Phe Gln Phe Ala Asp Gly
 20 25 30
 Lys Pro Gly Asp Gln Ile Leu Asp Trp Gln Tyr Gly Val Thr Gln
 35 40 45
 Ala Phe Pro His Thr Glu Glu Glu Val Glu Val Asp Ser His Ala
 50 55 60
 Tyr Ser His Arg Trp Lys Arg Asn Leu Asp Phe Leu Lys Ala Val
 65 70 75
 Asp Thr Asn Arg Ala Ser Val Gly Gln Asp Ser Pro Glu Pro Arg
 80 85 90
 Ser Phe Thr Asp Leu Leu Leu Asp Asp Gly Gln Asp Asn Asn Thr
 95 100 105
 Gln Ile Glu Glu Asp Thr Asp His Asn Tyr Tyr Ile Ser Arg Ile
 110 115 120
 Tyr Gly Pro Ser Asp Ser Ala Ser Arg Asp Leu Trp Val Asn Ile
 125 130 135
 Asp Gln Met Glu Lys Asp Lys Val Lys Ile His Gly Ile Leu Ser
 140 145 150
 Asn Thr His Arg Gln Ala Ala Arg Val Asn Leu Ser Phe Asp Phe
 155 160 165
 Pro Phe Tyr Gly His Phe Leu Arg Glu Ile Thr Val Ala Thr Gly
 170 175 180
 Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met Leu Thr Ala
 185 190 195
 Thr Gln Tyr Ile Ala Pro Leu Met Ala Asn Phe Asp Pro Ser Val
 200 205 210
 Ser Arg Asn Ser Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala Leu
 215 220 225

Val	Val	Gln	Trp	Asp 230	His	Val	His	Leu	Gln 235	Asp	Asn	Tyr	Asn	Leu 240
Gly	Ser	Phe	Thr	Phe 245	Gln	Ala	Thr	Leu	Leu 250	Met	Asp	Gly	Arg	Ile 255
Ile	Phe	Gly	Tyr	Lys 260	Glu	Ile	Pro	Val	Leu 265	Val	Thr	Gln	Ile	Ser 270
Ser	Thr	Asn	His	Pro 275	Val	Lys	Val	Gly	Leu 280	Ser	Asp	Ala	Phe	Val 285
Val	Val	His	Arg	Ile 290	Gln	Gln	Ile	Pro	Asn 295	Val	Arg	Arg	Arg	Thr 300
Ile	Tyr	Glu	Tyr	His 305	Arg	Val	Glu	Leu	Gln 310	Met	Ser	Lys	Ile	Thr 315
Asn	Ile	Ser	Ala	Val 320	Glu	Met	Thr	Pro	Leu 325	Pro	Thr	Cys	Leu	Gln 330
Phe	Asn	Arg	Cys	Gly 335	Pro	Cys	Val	Ser	Ser 340	Gln	Ile	Gly	Phe	Asn 345
Cys	Ser	Trp	Cys	Ser 350	Lys	Leu	Gln	Arg	Cys 355	Ser	Ser	Gly	Phe	Asp 360
Arg	His	Arg	Gln	Asp 365	Trp	Val	Asp	Ser	Gly 370	Cys	Pro	Glu	Glu	Ser 375
Lys	Glu	Lys	Met	Cys 380	Glu	Asn	Thr	Glu	Pro 385	Val	Glu	Thr	Ser	Ser 390
Arg	Thr	Thr	Thr	Thr 395	Val	Gly	Ala	Thr	Thr 400	Thr	Gln	Phe	Arg	Val 405
Leu	Thr	Thr	Thr	Arg 410	Arg	Ala	Val	Thr	Ser 415	Gln	Phe	Pro	Thr	Ser 420
Leu	Pro	Thr	Glu	Asp 425	Asp	Thr	Lys	Ile	Ala 430	Leu	His	Leu	Lys	Asp 435
Asn	Gly	Ala	Ser	Thr 440	Asp	Asp	Ser	Ala	Ala 445	Glu	Lys	Lys	Gly	Gly 450
Thr	Leu	His	Ala	Gly 455	Leu	Ile	Ile	Gly	Ile 460	Leu	Ile	Leu	Val	Leu 465
Ile	Val	Ala	Thr	Ala 470	Ile	Leu	Val	Thr	Val 475	Tyr	Met	Tyr	His	His 480
Pro	Thr	Ser	Ala	Ala 485	Ser	Ile	Phe	Phe	Ile 490	Glu	Arg	Arg	Pro	Ser 495
Arg	Trp	Pro	Ala	Met 500	Lys	Phe	Arg	Arg	Gly 505	Ser	Gly	His	Pro	Ala 510
Tyr	Ala	Glu	Val	Glu	Pro	Val	Gly	Glu	Lys	Glu	Gly	Phe	Ile	Val

Ser Glu Gln Cys

<210> 129
 <211> 4834
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 3784
 <223> unknown base

<400> 129
 gcagccctag cagggatgga catgatgctg ttggtgcagg gtgcttggtg 50
 ctggaaccag tggctggcgg cgggtgctcct cagcctgtgc tgcctgctac 100
 cctcctgcct cccggctgga cagagtgtgg acttcccctg ggcggccgtg 150
 gacaacatga tggtcagaaa aggggacacg gcggtgctta ggtgttattt 200
 ggaagatgga gcttcaaagg gtgcctggct gaaccggctca agtattattt 250
 ttgogggagg tgataagtgg tcagtggatc ctcgagtttc aatttcaaca 300
 ttgaataaaa gggactacag cctccagata cagaatgtag atgtgacaga 350
 tgatggccca tacacgtggt ctgttcagac tcaacatata cccagaacaa 400
 tgcaggtgca tctaactgtg caagttcctc ctaagatata tgacatctca 450
 aatgatatga ccgtcaatga aggaaccaac gtcactctta cttgtttggc 500
 cactgggaaa ccagagcctt ccatttcttg gcgacacatc tccccatcag 550
 caaaaccatt tgaaaatgga caatatttgg acatttatgg aattacaagg 600
 gaccaggctg gggaatatga atgcagtgcg gaaaatgatg tgtcattccc 650
 agatgtgagg aaagtaaaag ttgttgtaa ctttgctcct actattcagg 700
 aaattaaatc tggcaccgtg acccccggac gcagtggcct gataagatgt 750
 gaaggtgcag gtgtgccgcc tccagccttt gaatggtaca aaggagagaa 800
 gaagctcttc aatggccaac aaggaattat tattcaaaat tttagcacia 850
 gatccattct cactgttacc aacgtgacac aggagcaett cggcaattat 900
 acttgtgtgg ctgccaacaa gctaggcaca accaatgoga gcctgcctct 950
 taaccctcca agtacagccc agtatggaat taccgggagc gctgatgttc 1000
 ttttctcctg ctggtacett gtgttgacac tgtcctcttt caccagcata 1050

ttctacctga agaatgccat tctacaataa attcaaagac ccataaaagg 1100
 cttttaagga ttctctgaaa gtgctgatgg ctggatccaa tctggtacag 1150
 tttgttaaaa gcagcgtggg atataatcag cagtgcctac atggggatga 1200
 tcgccttctg tagaattgct cattatgtaa atactttaat tctactcttt 1250
 tttgattagc tacattacct tgtgaagcag tacacattgt ccttttttta 1300
 agacgtgaaa gctctgaaat tacttttaga ggatattaat tgtgatttca 1350
 tgtttgtaat ctacaacttt tcaaaagcat tcagtcattg tctgctaggt 1400
 tgcaggctgt agtttacaaa aacgaatatt gcagtgaata tgtgattcct 1450
 taaggctgca atacaagcat tcagttccct gtttcaataa gagtcaatcc 1500
 acatttacaa agatgcattt ttttcttttt tgataaaaaa gcaaataata 1550
 ttgccttcag attatttctt caaaatataa cacatatcta gatttttctg 1600
 ctgcctgat attcaggttt caggaatgag ccttgtaata taactggctg 1650
 tgcagctctg cttctctttc ctgtaagttc agcatgggtg tgccttcata 1700
 caataatatt tttctctttg tctccaacta atataaaatg ttttgctaaa 1750
 tcttacaatt tgaaagtaaa aataaaccag agtgatcaag ttaaaccata 1800
 cactatctct aagtaacgaa ggagctattg gactgtaaaa atctcttcct 1850
 gcactgacaa tggggtttga gaattttgcc ccacactaac tcagttcttg 1900
 tgatgagaga caatttaata acagtatagt aaatatacca tatgatttct 1950
 ttagttgtag ctaaagtta gatccaccgt gggaaatcat tccctttaa 2000
 atgacagcac agtccactca aaggattgcc tagcaataca gcatcttttc 2050
 ctttcactag tccaagccaa aaattttaag atgatttgtc agaaagggca 2100
 caaagtccta tcacctaata ttacaagagt tggtaagcgc tcatcattaa 2150
 ttttattttg tggcagctaa gttagtatga cagaggcagt gctcctgtgg 2200
 acaggagcat tttgcatatt ttccatctga aagtatcact cagttgatag 2250
 tctggaatgc atgttatata ttttaaaact tccaaaatat attataacaa 2300
 acattctata tcggtatgta gcagaccaat ctctaaaata gctaattctt 2350
 caataaaatc tttctatata gccatttcag tgcaaacaag taaaatcaaa 2400
 aaagaccatc ctttattttt ccttacatga tatatgtaag atgogatcaa 2450
 ataaagacaa aacaccagtg atgagaatat cttaagataa gtaattatca 2500

80										85					90				
Val	Ser	Ile	Ser	Thr	Leu	Asn	Lys	Arg	Asp	Tyr	Ser	Leu	Gln	Ile					
				95					100					105					
Gln	Asn	Val	Asp	Val	Thr	Asp	Asp	Gly	Pro	Tyr	Thr	Cys	Ser	Val					
				110					115					120					
Gln	Thr	Gln	His	Thr	Pro	Arg	Thr	Met	Gln	Val	His	Leu	Thr	Val					
				125					130					135					
Gln	Val	Pro	Pro	Lys	Ile	Tyr	Asp	Ile	Ser	Asn	Asp	Met	Thr	Val					
				140					145					150					
Asn	Glu	Gly	Thr	Asn	Val	Thr	Leu	Thr	Cys	Leu	Ala	Thr	Gly	Lys					
				155					160					165					
Pro	Glu	Pro	Ser	Ile	Ser	Trp	Arg	His	Ile	Ser	Pro	Ser	Ala	Lys					
				170					175					180					
Pro	Phe	Glu	Asn	Gly	Gln	Tyr	Leu	Asp	Ile	Tyr	Gly	Ile	Thr	Arg					
				185					190					195					
Asp	Gln	Ala	Gly	Glu	Tyr	Glu	Cys	Ser	Ala	Glu	Asn	Asp	Val	Ser					
				200					205					210					
Phe	Pro	Asp	Val	Arg	Lys	Val	Lys	Val	Val	Val	Asn	Phe	Ala	Pro					
				215					220					225					
Thr	Ile	Gln	Glu	Ile	Lys	Ser	Gly	Thr	Val	Thr	Pro	Gly	Arg	Ser					
				230					235					240					
Gly	Leu	Ile	Arg	Cys	Glu	Gly	Ala	Gly	Val	Pro	Pro	Pro	Ala	Phe					
				245					250					255					
Glu	Trp	Tyr	Lys	Gly	Glu	Lys	Lys	Leu	Phe	Asn	Gly	Gln	Gln	Gly					
				260					265					270					
Ile	Ile	Ile	Gln	Asn	Phe	Ser	Thr	Arg	Ser	Ile	Leu	Thr	Val	Thr					
				275					280					285					
Asn	Val	Thr	Gln	Glu	His	Phe	Gly	Asn	Tyr	Thr	Cys	Val	Ala	Ala					
				290					295					300					
Asn	Lys	Leu	Gly	Thr	Thr	Asn	Ala	Ser	Leu	Pro	Leu	Asn	Pro	Pro					
				305					310					315					
Ser	Thr	Ala	Gln	Tyr	Gly	Ile	Thr	Gly	Ser	Ala	Asp	Val	Leu	Phe					
				320					325					330					
Ser	Cys	Trp	Tyr	Leu	Val	Leu	Thr	Leu	Ser	Ser	Phe	Thr	Ser	Ile					
				335					340					345					
Phe	Tyr	Leu	Lys	Asn	Ala	Ile	Leu	Gln											
				350															

<210> 131
 <211> 823

<212> DNA
<213> Homo Sapien

<400> 131
atagtagaag aatgtctctg aaattactgg atgagtttca gtcatacttt 50
cacatgggca caatttcaca ttcaagctcc ttatcctagg ctaattttat 100
attatgttaa atcacttggt tttgttctca cggcttcctg cctgctatag 150
gcataattac gaggaagcag aacttctcca gaagcaagcg cacatgcgtt 200
ccaaaataag agcaaattcg ctctaaacac aggaaaagac ctgaagcttt 250
aattaagggg ttacatccaa cccagagcg cttttgtggg cactgattgc 300
tccagcttct gcgtcactgc gcgaggggaag agggaagagg atccaggcgt 350
tagacatgta tagacacaaa aacagctgga gattgggctt aaaataccca 400
ccaagctcca aagaagagac ccaagtcccc aaaacattga tttcagggct 450
gccaggaagg aagagcagca gcaggggtgg agagaagctc cagtcagccc 500
acaagatgcc attgtcccc ggccctcctgc tgctgctgct ctccggggcc 550
acggccaccg ctgccctgcc cctggagggt ggccccaccg gccgagacag 600
cgagcatatg caggaagcgg caggaataag gaaaagcagc ctctgactt 650
tcctcgcttg gtggtttgag tggacctccc aggccagtgc cggggccctc 700
ataggagagg aagctcggga ggtggccagg cggcaggaag gcgcaccccc 750
ccagcaatcc gcgcgccggg acagaatgcc ctgcaggaac ttcttctgga 800
agaccttctc ctctgcaaa tag 823

<210> 132
<211> 155
<212> PRT
<213> Homo Sapien

<400> 132
Met Tyr Arg His Lys Asn Ser Trp Arg Leu Gly Leu Lys Tyr Pro
1 5 10 15
Pro Ser Ser Lys Glu Glu Thr Gln Val Pro Lys Thr Leu Ile Ser
20 25 30
Gly Leu Pro Gly Arg Lys Ser Ser Ser Arg Val Gly Glu Lys Leu
35 40 45
Gln Ser Ala His Lys Met Pro Leu Ser Pro Gly Leu Leu Leu Leu
50 55 60
Leu Leu Ser Gly Ala Thr Ala Thr Ala Ala Leu Pro Leu Glu Gly
65 70 75

Gly	Pro	Thr	Gly	Arg	Asp	Ser	Glu	His	Met	Gln	Glu	Ala	Ala	Gly
				80					85					90
Ile	Arg	Lys	Ser	Ser	Leu	Leu	Thr	Phe	Leu	Ala	Trp	Trp	Phe	Glu
				95					100					105
Trp	Thr	Ser	Gln	Ala	Ser	Ala	Gly	Pro	Leu	Ile	Gly	Glu	Glu	Ala
				110					115					120
Arg	Glu	Val	Ala	Arg	Arg	Gln	Glu	Gly	Ala	Pro	Pro	Gln	Gln	Ser
				125					130					135
Ala	Arg	Arg	Asp	Arg	Met	Pro	Cys	Arg	Asn	Phe	Phe	Trp	Lys	Thr
				140					145					150
Phe	Ser	Ser	Cys	Lys										
				155										

<210> 133
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 133
 tcagggctgc caggaaggaa gagc 24

<210> 134
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 134
 gcaggaggag aaggtcttcc agaagaag 28

<210> 135
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 135
 agaagttcca gtcagcccac aagatgccat tgtcccccg cctcc 45

<210> 136
 <211> 1875
 <212> DNA
 <213> Homo Sapien

<400> 136
 gtcgtgtgct tggaggaagc cgcggaaccc ccagcgtccg tccatggcgt 50

ggagccttgg gagctggctg ggtggctgcc tgctggtgtc agcattggga 100
 atggtaccac ctcccgaaaa tgtcagaatg aattctgtta atttcaagaa 150
 cattctacag tgggagtcac ctgcttttgc caaagggaaac ctgactttca 200
 cagctcagta cctaagttat aggatattcc aagataaatg catgaatact 250
 accttgacgg aatgtgattt ctcaagtctt tccaagtatg gtgaccacac 300
 cttgagagtc agggctgaat ttgcagatga gcattcagac tgggtaaaca 350
 tcaccttctg tctgtggat gacaccatta ttggaccccc tggaatgcaa 400
 gtagaagtac ttgctgattc ttacatatg cgtttcttag cccctaaaat 450
 tgagaatgaa tacgaaactt ggactatgaa gaatgtgtat aactcatgga 500
 cttataatgt gcaatactgg aaaaacggta ctgatgaaaa gtttcaaatt 550
 actccccagt atgactttga ggtcctcaga aacctggagc catggacaac 600
 ttattgtgtt caagttcgag ggtttcttcc tgatcggaac aaagctgggg 650
 aatggagtga gcctgtctgt gagcaaacaa cccatgacga aacgggtcccc 700
 tcttgatgg tggccgtcat cctcatggcc tcggtcttca tgggtctgcct 750
 ggcactcctc ggctgcttct ccttgcctgt gtgcgtttac aagaagacaa 800
 agtacgcctt ctccctagg aattctcttc cacagcacct gaaagagttt 850
 ttggggccatc ctcatcataa cacacttctg tttttctcct ttccattgtc 900
 ggatgagaat gatgtttttg acaagctaag tgtcattgca gaagactctg 950
 agagcggcaa gcagaatcct ggtgacagct gcagcctcgg gaccccgct 1000
 gggcaggggc cccaaagcta ggctctgaga aggaaacaca ctgggctggg 1050
 cacagtgacg tactccatct cacatctgcc tcagtgaggg atcagggcag 1100
 caaacaaggg ccaagaccat ctgagccagc cccacatcta gaactccaga 1150
 cctggactta gccaccagag agctacattt taaaggctgt cttggcaaaa 1200
 atactccatt tgggaactca ctgccttata aaggctttca tgatgttttc 1250
 agaagttggc cactgagagt gtaattttca gccttttata tcactaaaat 1300
 aagatcatgt ttttaattgt agaaacaggg ccgagcacag tggtcacgc 1350
 ctgtaatacc agcaccttag aggtcgaggg aggcggatca cttgaggtca 1400
 ggagttcaag accagcctgg ccaatatggg gaaacccagt ctctactaaa 1450
 aatacaaaaa ttagctaggg atgatggcgc atgcctataa tcccagctac 1500

tcgagtgcct gaggcaggag aattgcatga acccgggagg aggaggagga 1550
 ggttgacagt agccgagata gcggcactgc actccagcct gggtgacaaa 1600
 gtgagactcc atctcaaaaa aaaaaaaaaa aaattgtgag aaacagaaat 1650
 acttaaaatg aggaataaga atggagatgt tacatctggt agatgtaaca 1700
 ttctaccaga ttatggatgg actgatctga aaatcgacct caactcaagg 1750
 gtggtcagct caatgctaca cagagcacgg acttttggat tctttgcagt 1800
 actttgaatt tattttttcta cctatatatg ttttatatgc tgctggtgct 1850
 ccattaaagt tttactctgt gttgc 1875

<210> 137

<211> 325

<212> PRT

<213> Homo Sapien

<400> 137

Met	Ala	Trp	Ser	Leu	Gly	Ser	Trp	Leu	Gly	Gly	Cys	Leu	Leu	Val
1				5					10					15
Ser	Ala	Leu	Gly	Met	Val	Pro	Pro	Pro	Glu	Asn	Val	Arg	Met	Asn
				20					25					30
Ser	Val	Asn	Phe	Lys	Asn	Ile	Leu	Gln	Trp	Glu	Ser	Pro	Ala	Phe
				35					40					45
Ala	Lys	Gly	Asn	Leu	Thr	Phe	Thr	Ala	Gln	Tyr	Leu	Ser	Tyr	Arg
				50					55					60
Ile	Phe	Gln	Asp	Lys	Cys	Met	Asn	Thr	Thr	Leu	Thr	Glu	Cys	Asp
				65					70					75
Phe	Ser	Ser	Leu	Ser	Lys	Tyr	Gly	Asp	His	Thr	Leu	Arg	Val	Arg
				80					85					90
Ala	Glu	Phe	Ala	Asp	Glu	His	Ser	Asp	Trp	Val	Asn	Ile	Thr	Phe
				95					100					105
Cys	Pro	Val	Asp	Asp	Thr	Ile	Ile	Gly	Pro	Pro	Gly	Met	Gln	Val
				110					115					120
Glu	Val	Leu	Ala	Asp	Ser	Leu	His	Met	Arg	Phe	Leu	Ala	Pro	Lys
				125					130					135
Ile	Glu	Asn	Glu	Tyr	Glu	Thr	Trp	Thr	Met	Lys	Asn	Val	Tyr	Asn
				140					145					150
Ser	Trp	Thr	Tyr	Asn	Val	Gln	Tyr	Trp	Lys	Asn	Gly	Thr	Asp	Glu
				155					160					165
Lys	Phe	Gln	Ile	Thr	Pro	Gln	Tyr	Asp	Phe	Glu	Val	Leu	Arg	Asn
				170					175					180

tatgccttct cggtgtgga ggagctgctc tactactgg gggagtccac 600
ctttgttaac atgaccacgc actctgtggc tgagtccttg ctgcaggagg 650
gcgtcacgca gcgctttatt gatgatgtcg tttctgctgt cctgcggggc 700
agctatggcc agtcagcagc gatgcccgc tttgcaggag ccatgtcact 750
agccggggcc caaggcagcc tgtggtctgt ggaaggaggc aataagctgg 800
tttgttccgg tttgctgaag ctcaccaagg ccaatgtgat ccatgccaca 850
gtgacctctg tgaccctgca cagcacagag gggaaagccc tgtaccagg 900
ggcgtatgag aatgaggtag gcaacagctc tgacttctat gacatcgtgg 950
tcacgcccac cccctgcac ctggacaaca gcagcagcaa cttaaccttt 1000
gcaggcttcc acccgcccat tgatgacgtg cagggtctct tccagcccac 1050
cgtcgtctcc ttggtccacg gctacctcaa ctgctctac ttcggtttcc 1100
cagaccctaa gcttttcccc tttgccaaca tcttaccac agatttcccc 1150
agcttcttct gcaactctga caacatctgc cctgtcaaca tctctgccag 1200
cttccggcga aagcagcccc aggaggcagc tgtttggcga gtccagtccc 1250
ccaagcccct ctttcggacc cagctaaaga cctgttccg ttcctattac 1300
tcagtgcaga cagctgagtg gcaggcccat cccctctatg gctcccggcc 1350
cacgctcccg aggtttgcac tccatgacca gctcttctac ctcaatgccc 1400
tgagtgggc gccagctcc gtggaggtga tggcgtggc tgccaagaat 1450
gtggccttgc tggcttaca cgcgtggtac caggacctag acaagattga 1500
tcaaaaagat ttgatgcaca aggtcaagac tgaactgtga gggctctagg 1550
gagagcctgg gaactttcat ccccaactga agatggatca tcccacagca 1600
gccaggact gaataagcca tgctogcca ccaggcttct ttctgacccc 1650
tcagtgtatca agcatctcca ggtgacctac tgtctgccta tattaagggt 1700
ccacacggcg gctgctgctt ttttttaagg gggaaagtaa gaaaagagaa 1750
ggaaatccaa gccagtatat ttgttttatt tttttttttt aagaagaaaa 1800
aagttcatct tcacaagggtg cttcagactt ggtttcttag ctagaaacca 1850
gaagactacg ggagggaata taaggcagag aactatgagt cttattttat 1900
tactgttttt cactacctac tcccacaatg gacaatcaat tgaggcaacc 1950
tacaagaaaa catttacaac cagatgggta caaataaagt agaagggaag 2000

atcagaaaac ctaagaaatg atcatagctc ctgggttactg tggacttgat 2050
 ggatttgaag tacctagttc agaactccct agtcaccatc tccaagcctg 2100
 tcaacatcac tgcattttgg aggagatgac tgtggtagga cccaaggaag 2150
 agatgtgtgc ctgaatagtc gtcaccatat ctccaagctt cctggcaacc 2200
 agtgggaaaa gaaacatgcg aggctgtagg aagagggaag ctcttccttg 2250
 gcacctagag gaattagcca ttctcttctt tatgcaaaga ttgaggaatg 2300
 caacaatata aagaagagaa gtccccagat ggtagagagc agtcatatct 2350
 taccctaga tggtcatccc agcagaagaa agaagaaggt gttggggtag 2400
 gattcttcag aggttagcct ggtactttct catcagacac tagcttgaag 2450
 taagaggaga attatgcttt tctttgcttt ttctacaaac ccttaaaaat 2500
 cacttgtttt aaaaagaaag taaaagccct tttcattcaa aaaaaaaaaa 2550
 aaaaaaaaaa aaaaaaaaaa 2570

<210> 139
 <211> 494
 <212> PRT
 <213> Homo Sapien

<400> 139
 Met Ala Arg Ala Ala Pro Leu Leu Ala Ala Leu Thr Ala Leu Leu
 1 5 10 15
 Ala Ala Ala Ala Ala Gly Gly Asp Ala Pro Pro Gly Lys Ile Ala
 20 25 30
 Val Val Gly Ala Gly Ile Gly Gly Ser Ala Val Ala His Phe Leu
 35 40 45
 Gln Gln His Phe Gly Pro Arg Val Gln Ile Asp Val Tyr Glu Lys
 50 55 60
 Gly Thr Val Gly Gly Arg Leu Ala Thr Ile Ser Val Asn Lys Gln
 65 70 75
 His Tyr Glu Ser Gly Ala Ala Ser Phe His Ser Leu Ser Leu His
 80 85 90
 Met Gln Asp Phe Val Lys Leu Leu Gly Leu Arg His Arg Arg Glu
 95 100 105
 Val Val Gly Arg Ser Ala Ile Phe Gly Gly Glu His Phe Met Leu
 110 115 120
 Glu Glu Thr Asp Trp Tyr Leu Leu Asn Leu Phe Arg Leu Trp Trp
 125 130 135
 His Tyr Gly Ile Ser Phe Leu Arg Leu Gln Met Trp Val Glu Glu

				140					145					150
Val	Met	Glu	Lys	Phe 155	Met	Arg	Ile	Tyr	Lys 160	Tyr	Gln	Ala	His	Gly 165
Tyr	Ala	Phe	Ser	Gly 170	Val	Glu	Glu	Leu	Leu 175	Tyr	Ser	Leu	Gly	Glu 180
Ser	Thr	Phe	Val	Asn 185	Met	Thr	Gln	His	Ser 190	Val	Ala	Glu	Ser	Leu 195
Leu	Gln	Val	Gly	Val 200	Thr	Gln	Arg	Phe	Ile 205	Asp	Asp	Val	Val	Ser 210
Ala	Val	Leu	Arg	Ala 215	Ser	Tyr	Gly	Gln	Ser 220	Ala	Ala	Met	Pro	Ala 225
Phe	Ala	Gly	Ala	Met 230	Ser	Leu	Ala	Gly	Ala 235	Gln	Gly	Ser	Leu	Trp 240
Ser	Val	Glu	Gly	Gly 245	Asn	Lys	Leu	Val	Cys 250	Ser	Gly	Leu	Leu	Lys 255
Leu	Thr	Lys	Ala	Asn 260	Val	Ile	His	Ala	Thr 265	Val	Thr	Ser	Val	Thr 270
Leu	His	Ser	Thr	Glu 275	Gly	Lys	Ala	Leu	Tyr 280	Gln	Val	Ala	Tyr	Glu 285
Asn	Glu	Val	Gly	Asn 290	Ser	Ser	Asp	Phe	Tyr 295	Asp	Ile	Val	Val	Ile 300
Ala	Thr	Pro	Leu	His 305	Leu	Asp	Asn	Ser	Ser 310	Ser	Asn	Leu	Thr	Phe 315
Ala	Gly	Phe	His	Pro 320	Pro	Ile	Asp	Asp	Val 325	Gln	Gly	Ser	Phe	Gln 330
Pro	Thr	Val	Val	Ser 335	Leu	Val	His	Gly	Tyr 340	Leu	Asn	Ser	Ser	Tyr 345
Phe	Gly	Phe	Pro	Asp 350	Pro	Lys	Leu	Phe	Pro 355	Phe	Ala	Asn	Ile	Leu 360
Thr	Thr	Asp	Phe	Pro 365	Ser	Phe	Phe	Cys	Thr 370	Leu	Asp	Asn	Ile	Cys 375
Pro	Val	Asn	Ile	Ser 380	Ala	Ser	Phe	Arg	Arg 385	Lys	Gln	Pro	Gln	Glu 390
Ala	Ala	Val	Trp	Arg 395	Val	Gln	Ser	Pro	Lys 400	Pro	Leu	Phe	Arg	Thr 405
Gln	Leu	Lys	Thr	Leu 410	Phe	Arg	Ser	Tyr	Tyr 415	Ser	Val	Gln	Thr	Ala 420
Glu	Trp	Gln	Ala	His 425	Pro	Leu	Tyr	Gly	Ser 430	Arg	Pro	Thr	Leu	Pro 435

Arg	Phe	Ala	Leu	His	Asp	Gln	Leu	Phe	Tyr	Leu	Asn	Ala	Leu	Glu
				440					445					450
Trp	Ala	Ala	Ser	Ser	Val	Glu	Val	Met	Ala	Val	Ala	Ala	Lys	Asn
				455					460					465
Val	Ala	Leu	Leu	Ala	Tyr	Asn	Arg	Trp	Tyr	Gln	Asp	Leu	Asp	Lys
				470					475					480
Ile	Asp	Gln	Lys	Asp	Leu	Met	His	Lys	Val	Lys	Thr	Glu	Leu	
				485					490					

<210> 140
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 140
 gggacgtgct tctacaagaa cag 23

<210> 141
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 141
 caggcttaca atgttatgat cagaca 26

<210> 142
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 142
 tattcagagt tttccattgg cagtgccagt t 31

<210> 143
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 143
 ggccttgacag acaaccgt 18

<210> 144
 <211> 21

<220>
<223> Synthetic oligonucleotide probe

<400> 149
ggcagagact tccagtcact ga 22

<210> 150
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 150
gccaaaggggtg gtgtagata gg 22

<210> 151
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 151
caggccccct tgatctgtac ccca 24

Sequence